ENSOLUM

September 14, 2023

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

Re: Deferral Request
Becknell State Com 003H
Incident Number NAPP2318741823
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this *Deferral Request* to document assessment and soil sampling activities performed at the Becknell State Com 003H (Site). The purpose of the Site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil following a release of crude oil within a lined containment at the Site. Based on field observations, field screening activities, and soil sample laboratory analytical results, COG is submitting this *Deferral Request*, describing Site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Number NAPP2318741823 until the Site is reconstructed, and/or the well pad is abandoned.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit K, Section 05, Township 21 South, Range 33 East, in Lea County, New Mexico (32.5073°, -103.5965°) and is associated with oil and gas exploration and production operations on State Land managed by the New Mexico State Land Office (NMSLO).

On June 25, 2023, a loose connection on a hammer union resulted in the release of approximately 138.2209 barrels (bbls) of crude oil into the lined containment. A vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 116 bbls of crude oil were recovered. COG removed saturated pea gravel within the containment and backfilled with clean material. COG reported the release immediately via email to the New Mexico Oil Conservation Division (NMOCD) and submitted a *Release Notification Form C-141* (Form C-141) on July 6, 2023. The release was assigned Incident Number NAPP2318741823.

Since the release remained within a lined containment on the active well pad, an assessment of cultural properties had already been completed prior to the construction of the well pad and as such, the Cultural Properties Protection Rule (CPP) has been followed. No additional cultural resource surveys were completed in connection with this release. The release area is not expected to be reclaimed until the oil and gas well is plugged and abandoned and the well pad is reclaimed. The Reclamation Plan for this release will default to the NMSLO-approved Reclamation Plan for the well pad per 19.2.100.67 of the New Mexico Administrative Code (NMAC).

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized for applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the NMAC. Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be between 51 feet and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 322955103342801, located approximately 1.4 miles southeast of the Site. The groundwater well has a reported depth to groundwater of 128.75 and a total depth of 147 feet bgs.

There are nine water wells located between 1.4 miles and 4 miles of the Site indicating regional depth to groundwater is greater than 55 feet bgs. There are no surface features, such as watercourses, ponds, wetlands, or vegetation indicative of shallow groundwater near the Site. Based on the number of wells surrounding the Site, a consistent pattern of depth to groundwater that corresponds to topography and, therefore, underlying geology, it is evident that groundwater is deep and a conservative estimate of between 51 and 100 feet bgs is estimated. All wells used for depth to groundwater determination are presented on Figure 1. The referenced well records and a map showing the distance to surrounding wells are included in Appendix A.

The closest continuously flowing or significant watercourse to the Site is an intermittent stream, located approximately 3,091 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization and a conservative depth to groundwater estimate, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND LABORATORY ANALYTICAL RESULTS

A 48-hour advance notice of the liner inspection was provided via email on July 5, 2023, to the NMOCD. A liner integrity inspection was conducted by Ensolum personnel on July 21, 2023. Upon inspection, the liner was determined to be insufficient. Four delineation soil samples (SS01 through SS04) were collected around the lined containment at a depth of 0.5 feet bgs to confirm the lateral extent of the release.

On August 3, 2023, one borehole (BH01) was advanced via hand auger at the location of the tear in the liner to assess for the presence or absence of impacted soil. Discrete delineation soil samples BH01 and BH01A were collected from the borehole at depths of 0.5 feet and 1-foot bgs. Hand auger refusal

was encountered at a depth of 1-foot bgs. The delineation soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations from the borehole were documented on a lithologic/soil sampling log, which is included as Appendix B. The borehole was backfilled with the soil removed and COG repaired the tear in the liner. The delineation soil sample locations are depicted on Figure 2. Photographic documentation was conducted at the Site. A photographic log is included in Appendix C.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analyses of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for delineation soil samples SS01 through SS04, collected around the lined containment, indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and successfully defined the lateral extent of the release. Laboratory analytical results for delineation soil sample BH01, collected at 0.5 feet bgs beneath the tear in the liner, indicated TPH-GRO/TPH-DRO concentrations exceeded the Site Closure Criteria. Laboratory analytical results for delineation soil sample BH01A, collected at 1-foot bgs beneath the tear in the liner, indicated all COC concentrations were compliant with the Site Closure Criteria and defined the vertical extent of the release. Due to hand auger refusal at 1-foot bgs beneath the lined containment, vertical delineation to below the most stringent Table 1 Closure Criteria was not able to be achieved. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix D.

DEFERRAL REQUEST

COG is requesting a deferral of final remediation due to the presence of active production equipment and surface pipelines within the lined containment. The impacted soil is limited to the area immediately beneath the lined containment and active production equipment, where remediation would require a major facility deconstruction.

The impacted soil remaining in place beneath the liner is delineated vertically by delineation soil sample BH01A, collected at 1-foot bgs, and laterally by delineation soil samples SS01 through SS04. A maximum of 268 yards of TPH impacted soil remains in place beneath the liner assuming a maximum 1-foot depth based on the delineation soil samples listed above, that were compliant with the Site Closure Criteria.

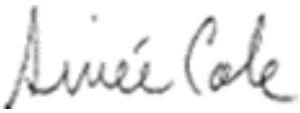
COG does not believe deferment will result in imminent risk to human health, the environment, or groundwater. Depth to groundwater has been estimated to be between 51 feet and 100 feet bgs, the release was contained laterally by the lined containment, and the impacted soil remaining in place is limited to the area immediately beneath the liner. The liner has been repaired by COG which will restrict future vertical migration of residual impacts.

Based on the presence of active production equipment within the release area and the complete lateral and vertical delineation of impacted soil remaining in place, COG requests deferral of final remediation for Incident Number NAPP2318741823 until final reclamation of the well pad or major construction, whichever comes first.

If you have any questions or comments, please contact Ms. Hadlie Green at (432) 557-8895 or hgreen@ensolum.com.

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist



Aimee Cole
Senior Managing Scientist

cc: Jacob Laird, COG Operating, LLC
New Mexico State Land Office

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic/Soil Sampling Log
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix E	NMOCD Notifications
Appendix F	Final C-141

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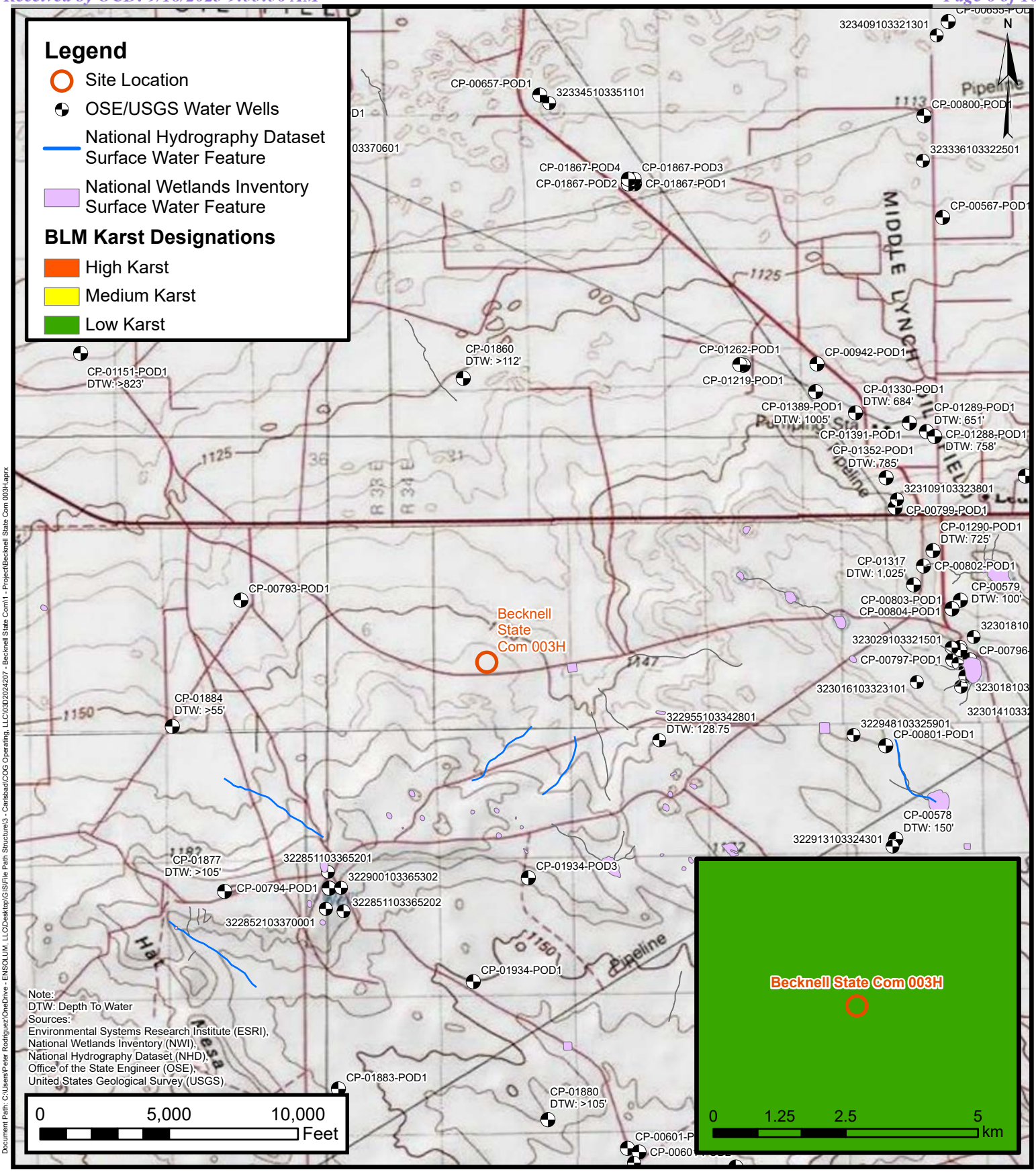
FIGURES



Document Path: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\GIS\File Path Structure\3 - Carlsbad\COG Operating, LLC\03D20242207 - Becknell State Com\1 - Project\Becknell State Com 003H.aprx

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

COG Operating, LLC

Becknell State Com 003H

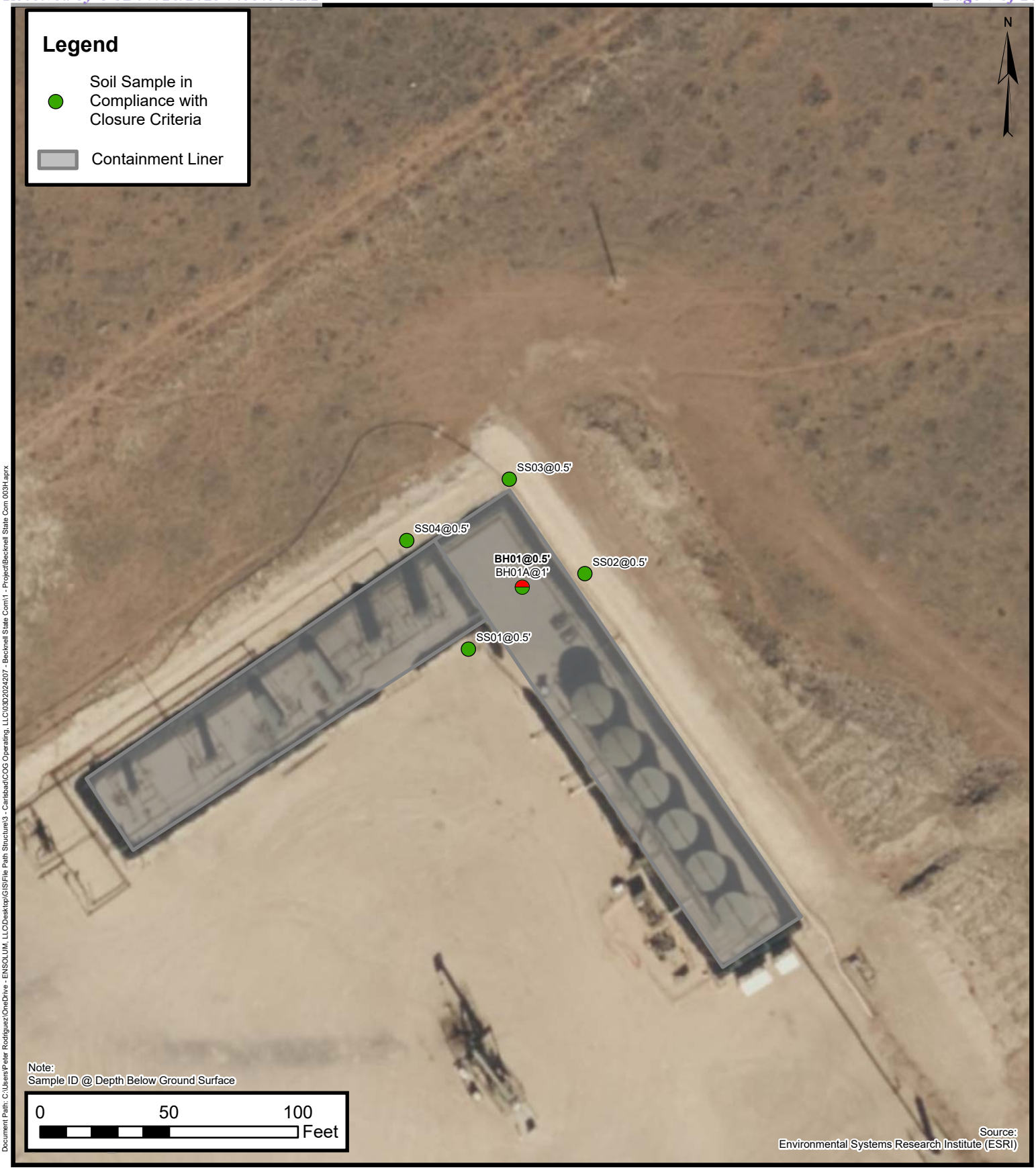
Incident Number: NAPP2318741823

Unit K, Section 5, T21S, R33E

Lea County, New Mexico

FIGURE

1



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Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

COG Operating, LLC
Becknell State Com 003H
Incident Number: NAPP2318741823
Unit K, Section 5, T21S, R33E
Lea County, New Mexico

FIGURE
2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Becknell State Com 003H
COG Operating, LLC
Lea County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**10,000**
Delineation Soil Samples										
SS01	07/21/2023	0.5	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	282
SS02	07/21/2023	0.5	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	81.4
SS03	07/21/2023	0.5	<0.00199	<0.00398	<50.4	<50.4	<50.4	<50.4	<50.4	103
SS04	07/21/2023	0.5	<0.00200	<0.00399	<50.3	<50.3	<50.3	<50.3	<50.3	111
BH01	08/03/2023	0.5	<0.00198	0.157	96.0	1,920	<50.1	**2,016**	2,020	337
BH01A	08/03/2023	1	<0.00201	0.0264	<49.6	735	<49.6	735	735	406

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

NE: Not Established

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

*Concentrations in **bold** exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.*

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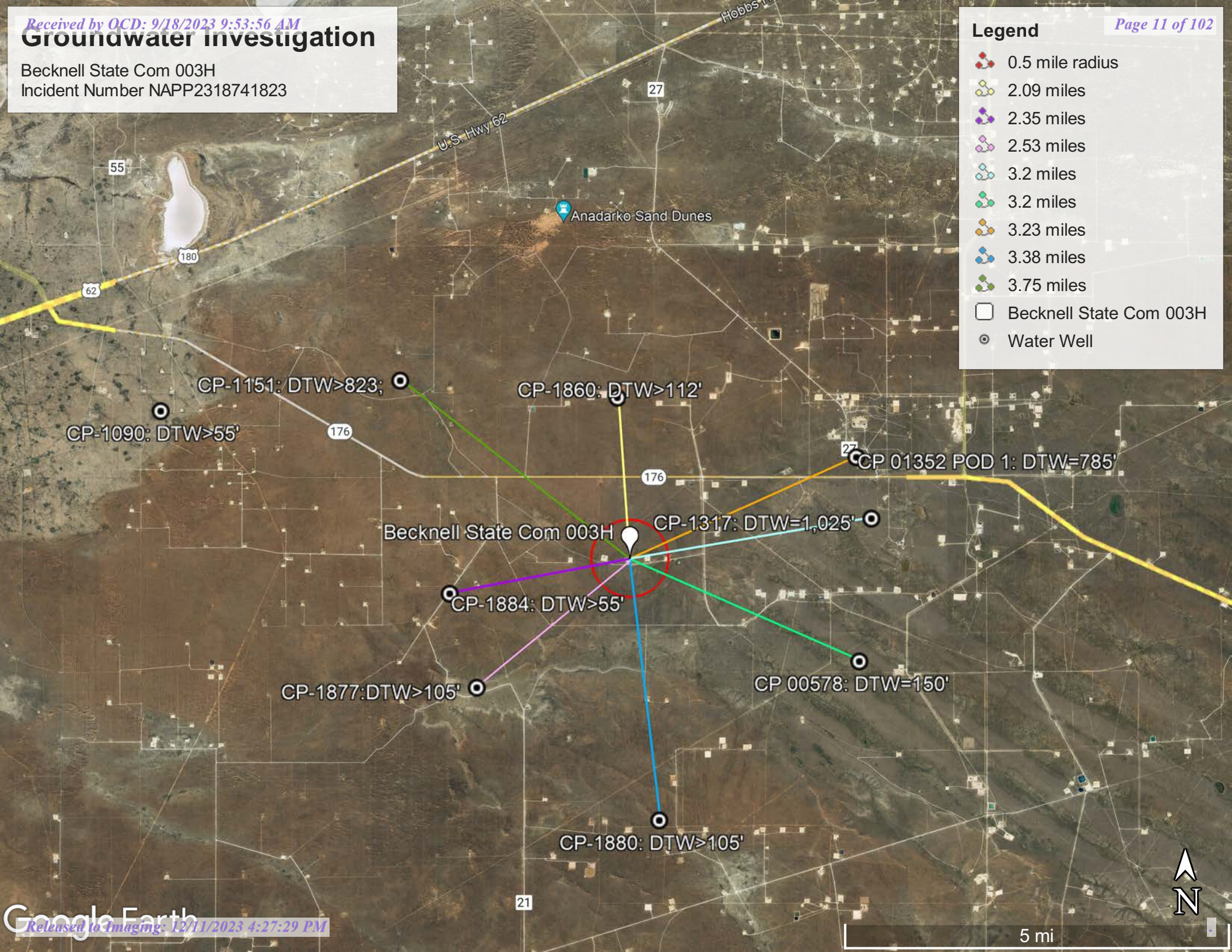
APPENDIX A

Referenced Well Records

Groundwater Investigation

Becknell State Com 003H
Incident Number NAPP2318741823



Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322955103342801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 322955103342801 21S.33E.04.43430

Lea County, New Mexico
Latitude 32°29'55", Longitude 103°34'28" NAD27
Land-surface elevation 3,837 feet above NAVD88
The depth of the well is 147 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source measur
1972-10-02		D	62610		3706.21	NGVD29	1	Z		
1972-10-02		D	62611		3707.84	NAVD88	1	Z		
1972-10-02		D	72019	129.16			1	Z		
1976-12-29		D	62610		3706.62	NGVD29	1	Z		
1976-12-29		D	62611		3708.25	NAVD88	1	Z		
1976-12-29		D	72019	128.75			1	Z		

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface

Section	Code	Description
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions or Comments
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey
Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2023-07-03 14:58:07 EDT
0.29 0.25 nadww02

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-1860 CP-1860

WELL OWNER NAME(S)	PHONE (OPTIONAL)
XTO Energy (Kyle Littrell)	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6401 Holiday Hill Dr.	Midland	TX	79707

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32°	32'	15.33"	N
	LONGITUDE	-103°	35'	56.38"	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SW SE Sec. 30 T20S R34E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
02/25/2021	02/25/2021	temporary well material	112	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	112	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

RECEIVED NOV 11 2021

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1860	POD NO. 1	TRN NO. 682530	
LOCATION 32 3 T20S R34E Sec 30		WELL TAG ID NO. NA	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	2	2	Caliche, tan, off-white, no odor, no stain, gravel, dry	Y ✓ N	
2	6	4	Sand, brown, no odor,no stain, m-f,well sorted, trace silt, dry	Y ✓ N	
6	15	9	Sandy clay,brown, moist, no odor, no stain, m-f, well sorted, no plasticty, no coh	Y ✓ N	
15	21	6	Clayey sand, tan-brown, moist, no odor, no stain, m-f, well sorted, cohesive, low	Y ✓ N	
21	--	--	Caliche w/ sand, tan, off-white, no odor, no stain, m-f grain, well sorted, dry	Y ✓ N	
--	40	19	23-gravel caliche 37-increase in sand content	Y ✓ N	
40	44	44	Sand w/ caliche, tan, brown, m-f grain, well sorted, no odor, no stain, dry	Y ✓ N	
44	58	14	Sandstone, mod. consolidation, m-f grain, increasing caliche tan/brown, dry,	Y ✓ N	
58	65	7	Clayey sand, brown, dry, m-f grain, well sorted, cohesive, medium plasticity	Y ✓ N	
65	78	13	Claystone, no odor, no stain, high plasticity, cohesive,brown, moist	Y ✓ N	
78	79	2	med-f grain sand stringer	Y ✓ N	
79	108	29	Claystone, no odor, no stain, high plasticity, cohesive,brown, moist	Y ✓ N	
108	109	1	fine grain sand stringer	Y ✓ N	
109	112	3	Claystone, no odor, no stain, high plasticity, cohesive,brown, moist	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.

OSE DII MAR 11 2021 PM4:28

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 03/09/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.	CP - 1860	POD NO.	1	TRN NO.	682530
LOCATION	323 T20S R34E Sec30			WELL TAG ID NO.	NA

PAGE 2 OF 2

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 682530
File Nbr: CP 01860
Well File Nbr: CP 01860 POD1

Apr. 08, 2021

TACOMA MORRISSEY
WSP USA
3300 NORTH A STREET
BLDG 1 #222
MIDLAND, TX 79705

Greetings:

The above numbered permit was issued in your name on 12/01/2020.

The Well Record was received in this office on 03/11/2021, stating that it had been completed on 02/25/2021, and was a dry well. The well is to be plugged according to 19.27.4.30 NMAC.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 12/01/2021.

If you have any questions, please feel free to contact us.

Sincerely,

Andrew Dennis
(575)622-6521

drywell

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	CP-1884

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Ascent Energy	

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
P.O Box 270983	Littleton	CO	80127

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	30	3.18	N
	LONGITUDE	103	38	10.22	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SW SW SW Sec. 01 T21S R32E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
09/08/2021	09/08/2021	temporary well material	55	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	55	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

RECEIVED SEP 28 2021 4:01

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1884	POD NO. 1	TRN NO. 699871	
LOCATION 21S-32E-01 333		WELL TAG ID NO. N/A	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	9	9	Sand, Medium/fine, with some caliche, Red	Y ✓ N	
9	14	5	Sand, Medium/fine, with some caliche, Brown	Y ✓ N	
14	24	10	Caliche with Medium/fine sannd, Off white	Y ✓ N	
24	34	10	Sand, Medium/fine, with some caliche, Brown	Y ✓ N	
34	55	21	Caliche with Medium/fine sannd, Off white	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Cameron Pruitt and Carmelo Trevino

OSE DII SEP 28 2021 PM3:01

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 09/27/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1884	POD NO. 1	TRN NO. 699871	
LOCATION 21S-32E-01 333		WELL TAG ID NO. N/A	PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (TW-1)	n/a	~~C-1877~~ CP-1877

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Advanced Energy Partners	832.672.4700

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
11490 Westheimer Rd. Stuit 950	Houston	TX	77077

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	28	59.64	N
	LONGITUDE	103	37	47.48	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

SE NE NW Sec. 13 T21S R32E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
09/21/2021	09/21/2021	temporary well material	105	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	105	±6.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
				OSE DII OCT 22 2021 PM2:45	

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1877	POD NO. 1	TRN NO. 699501	
LOCATION Mon 21S.32E.13.124		WELL TAG ID NO. —	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	19	19	Caliche, consolidated with sand, White	Y ✓ N	
19	29	10	Sand, Fine-grained, poorly graded, Tan	Y ✓ N	
29	105	76	Sand, Fine-grained, poorly graded, Reddish Brown	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface. Logs adapted from WSP on-site geologist.

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING: OSE DII OCT 22 2021 PM2:45

Jack Atkins — Jackie D. Atkins — 10-22-2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO. CP-1877	POD NO. 1	TRN NO. 699501	
LOCATION Mon 21S.32E.13.124		WELL TAG ID NO. —	PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER): CP - 1317	OSE FILE NUMBER(S):
WELL OWNER NAME(S): Berry Ranch/Glenn's Water Well Service, Inc.	PHONE (OPTIONAL): (575)398-2424
WELL OWNER MAILING ADDRESS: P.O. Box 692	CITY: Tatum / STATE: NM / ZIP: 88267

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	30	53.76	N
LONGITUDE	103	32	33.60	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS:

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	NW ¼	SW ¼	NE ¼	2	21 ☐ NORTH ☑ SOUTH	33 ☑ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD 421	Corky Glenn	Glenn's Water Well Service, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
5/9/14	5/15/14	1250'	1250'	1025'

COMPLETED WELL IS: ☑ ARTESIAN ☐ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: ☐ AIR ☑ MUD ☐ ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
0	40'	20"	16"	none	15 1/2"	.250	
0	1017'	14 3/4"	9 5/8"	Thread and collar	8.921"	.352	

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)
1025'	1212'	187'	Brown Sand Rock, Santa Rosa Sand	50

2014 MAY 27 AM 10:45

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

TOTAL ESTIMATED WELL YIELD (GPM):

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	CP-1317	POD NUMBER		TRN NUMBER	545000
LOCATION	Exp1	21S.33E.2.231			PAGE 1 OF 2

5. SEAL AND PUMP

TYPE OF PUMP: ☑ SUBMERSIBLE ☐ JET ☐ NO PUMP – WELL NOT EQUIPPED ☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	0	40'	20"	cemented	2 yds	Top Pour
	0	1017'	14 3/4"	Float and shoe cemented to surface	740 sacks	Circulated

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
0	2	2	Soil	☐ YES ☑ NO
2	29	27	Caleche	☐ YES ☑ NO
29	115	86	Sand	☐ YES ☑ NO
115	320	205	Red Clay with Rock Ledges	☐ YES ☑ NO
320	728	408	Red Clay and Brown Shale	☐ YES ☑ NO
728	760	32	Red Clay	☐ YES ☑ NO
760	1025	265	Red and Brown Shale(some Blue)	☐ YES ☑ NO
1025	1048	23	Brown Sand Rock	☑ YES ☐ NO
1048	1212	164	Santa Rosa Sand	☑ YES ☐ NO
1212	1250	38	Brown Shale and Sand Rock	☐ YES ☑ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST: METHOD: ☐ BAILER ☑ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY:

TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

ADDITIONAL STATEMENTS OR EXPLANATIONS:

0 to 1017' drilled with mud. 1017' to 1250' drilled with air and foam.

8. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Travis Glenn — SIGNATURE OF DRILLER

5/22/2014 — DATE

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

Revised June 1972

'80 MAR 18 PM 1 14

STATE ENGINEER OFFICE

WELL RECORD

SANTA FE

STATE ENGINEER OFFICE
SANTA FE, N.M. 87501

Section 1. GENERAL INFORMATION

(A) Owner of well Merchant Livestock Company Owner's Well No. _____
Street or Post Office Address Box 548
City and State Carlsbad, New Mexico 88220

Well was drilled under Permit No. CP-578 and is located in the:

a. _____ ¼ SE ¼ SW ¼ _____ ¼ of Section 11 Township 21-S Range 33-E N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in Lea County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor W. L. Van Noy License No. WD-208

Address P. O. Box 74 Oil Center, New Mexico 88266

Drilling Began Jan 1, 1979 Completed Jan 6, 1979 Type tools Spudder Size of hole 8" in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well 165 ft.

Completed well is ☐ shallow ☐ artesian. Depth to water upon completion of well 150 ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
150	165	15	Sand & gravel	

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
6 5/8	welded		0	150	150	none	145	160

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

Section 5. PLUGGING RECORD

Plugging Contractor _____
Address _____
Plugging Method _____
Date Well Plugged _____
Plugging approved by:
_____
State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received January 10, 1979

Quad _____ FWL _____ FSL _____

File No. CP-578 Use STOCK Location No. 21.33.11. 34000

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0o	5	5	top soil
5	30	25	caliche
30	45	15	sandy shale & caliche
45	150	105	firm ~~XXXXX~~ sandy shale
150	165	15	sand & gravel
165			red clay.

'79 JAN 10 AM 8 10

STATE ENGINEER OFFICE
ROSWELL, N.M.

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

W. L. Van Hay
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired, or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

New Mexico Office of the State Engineer
Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	CP 01352 POD1	3	1	4	34	20S	34E	636559	3599716

Driller License: 421 **Driller Company:** GLENN'S WATER WELL SERVICE

Driller Name: GLENN, CLARK A."CORKY"

Drill Start Date: 07/29/2016 **Drill Finish Date:** 07/30/2016 **Plug Date:**

Log File Date: 08/09/2016 **PCW Rcv Date:** **Source:** Artesian

Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 42 GPM

Casing Size: 6.50 **Depth Well:** 1270 feet **Depth Water:** 785 feet

Water Bearing Stratifications:

Top	Bottom	Description
999	1022	Sandstone/Gravel/Conglomerate
1022	1085	Sandstone/Gravel/Conglomerate
1085	1107	Sandstone/Gravel/Conglomerate
1107	1128	Sandstone/Gravel/Conglomerate
1128	1234	Sandstone/Gravel/Conglomerate
1234	1270	Shale/Mudstone/Siltstone

Casing Perforations:

Top	Bottom
947	1270

Meter Number: 17856 **Meter Make:** SEAMETRICS

Meter Serial Number: 12 210 740 **Meter Multiplier:** 1.0000

Number of Dials: 8 **Meter Type:** Diversion

Unit of Measure: Barrels 42 gal. **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:** Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
12/31/2016	2016	20083	A	ap		0	
01/31/2017	2017	20352	A	ap		3.467	
03/01/2017	2017	24169	A	ap		49.199	
04/01/2017	2017	24169	A	ap		0	
05/01/2017	2017	24169	A	ap		0	
06/01/2017	2017	24169	A	ap		0	
06/30/2017	2017	50671	A	ap		341.593	
07/31/2017	2017	73096	A	ap		289.043	
10/31/2017	2017	128138	A	ap		709.454	
11/30/2017	2017	138961	A	ap		139.501	
12/29/2017	2017	138961	A	ap		0	
01/31/2018	2018	198987	A	ap		773.695	
02/28/2018	2018	219209	A	ap		260.648	
03/30/2018	2018	236399	A	ap		221.568	
04/30/2018	2018	254856	A	ap		237.898	

06/01/2018	2018	260493	A	ap	72.657	
06/29/2018	2018	265385	A	ap	63.055	
07/31/2018	2018	265385	A	ap	0	
09/01/2018	2018	265385	A	ap	0	
10/01/2018	2018	265385	A	ap	0	
11/01/2018	2018	265385	A	ap	0	
11/30/2018	2018	265385	A	ap	0	
03/01/2019	2019	273371	A	ap	102.934	
04/01/2019	2019	282740	A	Ap	120.760	
05/01/2019	2019	303670	A	Ap	269.774	
05/31/2019	2019	318821	A	Ap	195.286	
06/30/2019	2019	318821	A	Ap	0	
08/01/2019	2019	323078	A	RPT	0.549	
09/01/2019	2019	330695	A	RPT	0.982	
09/30/2019	2019	335482	A	RPT	0.617	
10/31/2019	2019	345706	A	RPT	1.318	
11/30/2019	2019	365264	A	RPT	2.521	
12/31/2019	2019	387964	A	RPT	2.926	
02/01/2020	2020	404703	A	RPT	2.158	
03/01/2020	2020	404703	A	RPT	0	
04/01/2020	2020	404703	A	RPT	0	
05/01/2020	2020	404703	A	RPT	0	
06/01/2020	2020	404703	A	RPT	0	
09/01/2020	2020	410299	A	RPT	0.721	
10/01/2020	2020	413825	A	RPT	0.454	
10/31/2020	2020	413825	A	WEB	0	X
11/30/2020	2020	415371	A	WEB	0.199	X
12/30/2020	2020	415371	A	RPT	0	
12/31/2020	2020	0	A	RPT	0	
01/31/2021	2021	0	A	ad	0	
02/28/2021	2021	0	A	ad	0	
03/31/2021	2021	0	A	ad	0	
04/30/2021	2021	885	A	ad	0.114	
05/31/2021	2021	926	A	ad	0.005	
06/30/2021	2021	1080	A	ad	0.020	
07/31/2021	2021	1107	A	ad	0.003	
08/31/2021	2021	1107	A	ad	0	
09/30/2021	2021	1107	A	ad	0	
10/31/2021	2021	1559	A	ad	0.058	
11/30/2021	2021	1674	A	ad	0.015	
01/03/2022	2022	2533	A	ad	0.111	
01/31/2022	2022	2533	A	ad	0	
02/28/2022	2022	2533	A	ad	0	
03/10/2022	2022	2595	A	ad	0.008	
06/01/2022	2022	0	A	ad	0	
07/01/2022	2022	5527	A	ad	0.712	
08/01/2022	2022	6599	A	ad	0.138	
09/01/2022	2022	15325	A	WEB	1.125	X
10/01/2022	2022	20225	A	WEB	0.632	X

11/01/2022	2022	20286	A	WEB	0.008	X
12/01/2022	2022	20286	A	WEB	0	X
01/01/2023	2022	20286	A	WEB	0	X
02/01/2023	2023	20286	A	WEB	0	X
03/01/2023	2023	20286	A	WEB	0	X
04/01/2023	2023	20286	A	WEB	0	X
05/01/2023	2023	20286	A	WEB	0	X
06/01/2023	2023	20286	A	WEB	0	X
07/01/2023	2023	20286	A	WEB	0	X
08/01/2023	2023	20286	A	WEB	0	X

x

****YTD Meter Amounts:**	**Year**	**Amount**
	2016	0
	2017	1532.257
	2018	1629.521
	2019	697.667
	2020	3.532
	2021	0.215
	2022	2.734
	2023	0

x

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (TW-1)	n/a	CP-1880

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Advanced Energy Partners	832.672.4700

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
11490 Westheimer Rd. Stuit 950	Houston	TX	77077

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	27	30.43	N
	LONGITUDE	103	35	22.44	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

SE SE NE Sec. 30 T21S R33E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1249	Jackie D. Atkins	Atkins Engineering Associates, Inc.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/08/2021	10/08/2021	temporary well material	105	n/a

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): n/a

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☑ OTHER – SPECIFY: Hollow Stem Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	105	±6.5	Boring- HSA	--	--	--	--

OSE JUL 12 2021 AM 9:18

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT

FOR OSE INTERNAL USE WR-20 WELL RECORD & LOG (Version 06/30/17)

FILE NO. CP-1880	POD NO. 1	TRN NO. 6096664	
LOCATION 21S.33E.20.443		WELL TAG ID NO.	PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	9	9	Caliche, with fine-grained sand, White/Tan	Y ✓N	
9	19	10	Sand, Fine-grained, poorly graded, with Caliche, Tan/ Brown	Y ✓N	
19	105	86	Sand, Fine-grained, poorly graded, Tan/ Brown	Y ✓N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☐ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Temporary well materials removed and the soil boring backfilled using drill cuttings from total depth to ten feet below ground surface, then hydrated bentonite chips from ten feet below ground surface to surface.

OSE DII NOV 2 2021 AM 9:15

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Shane Eldridge, Carmelo Trevino, Cameron Pruitt

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

Jack Atkins — Jackie D. Atkins — 10/29/2021

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/30/2017)

FILE NO.	POD NO.	TRN NO.	
LOCATION		WELL TAG ID NO.	PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

STATE ENGINEER OFFICE

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	1
OSE FILE NUMBER(S)	CP-1151
WELL OWNER NAME(S)	Caza Operating LLC, Richard Wright
PHONE (OPTIONAL)	
WELL OWNER MAILING ADDRESS	200 North Loraine
CITY / STATE / ZIP	Midland, Tx 79701

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	32	0.446	N
LONGITUDE	-103	38	3827	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

N½ Sec. 32 Township 22S Range 36E

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1292	Billy L. Bentle	Bentle Water Well Ser.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
2-21-13	4-12-13		823	

STATIC WATER LEVEL IN COMPLETED WELL (FT):

COMPLETED WELL IS: ○ ARTESIAN ◉ DRY HOLE ○ SHALLOW (UNCONFINED)

DRILLING FLUID: ○ AIR ◉ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ○ ROTARY ○ HAMMER ◉ CABLE TOOL ○ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
+1	6	18	A-53 B	PE	12¼	.250	—
0	823	6	none dry hole				

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	6	18	~~Cement~~ Cement	3	Tremie
0	823	6	Cement	340	Tremie

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1151	POD NUMBER	1	TRN NUMBER	520275
LOCATION	OWD	22S.35E.35.222			PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	3	3	Top Soil	Y (N)	
3	11	8	Caliche	Y (N)	
11	20	9	Sandy Clay	Y (N)	
20	28	8	Dry Sand	Y (N)	
28	31	3	Rock	Y (N)	
31	53	22	Red Sandy Clay	Y (N)	
53	131	78	Red Bed	Y (N)	
131	162	31	Lime	Y (N)	
162	193	31	Sand	Y (N)	
193	260	67	Red Bed	Y (N)	
260	336	76	Rock	Y (N)	
336	484	148	Red Bed w/sand stringers	Y (N)	
484	519	35	Red & Blue Clay	Y (N)	
519	529	10	Sand	Y (N)	
529	543	14	Hard Red & Blue Clay	Y (N)	
543	638	95	Red & Blue clay w/tight sand stringers	Y (N)	
638	730	92	Red & Blue Clay	Y (N)	
730	732	2	Rock	Y (N)	
732	823	95	Red Bed	Y (N)	
				Y (N)	
				Y (N)	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ( ) PUMP (•) AIR LIFT ( ) BAILER ( ) OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): DRY

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

!!!!!!!!!!!!!

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Billy Bantle 4-27-13

SIGNATURE OF DRILLER / PRINT SIGNEE NAME DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	CP-1151	POD NUMBER	1	TRN NUMBER	520275
LOCATION	OWD	225.35E.35.222			PAGE 2 OF 2

Locator Tool Report

General Information:

Application ID:29 Date: 02-24-2017 Time: 10:27:10

WR File Number: CP-01151
Purpose: POINT OF DIVERSION

Applicant First Name: RANDALL
Applicant Last Name: HICKS

GW Basin: CAPITAN
County: LEA

Critical Management Area Name(s): NONE
Special Condition Area Name(s): NONE
Land Grant Name: NON GRANT

PLSS Description (New Mexico Principal Meridian):

SE 1/4 of SE 1/4 of NW 1/4 of SE 1/4 of Section 27, Township 20S, Range 33E.

Coordinate System Details:

Geographic Coordinates: Well Drillers Lat and Long

Latitude:	32 Degrees	32 Minutes	26.8 Seconds	N
Longitude:	103 Degrees	38 Minutes	49.6 Seconds	W

Universal Transverse Mercator Zone: 13N

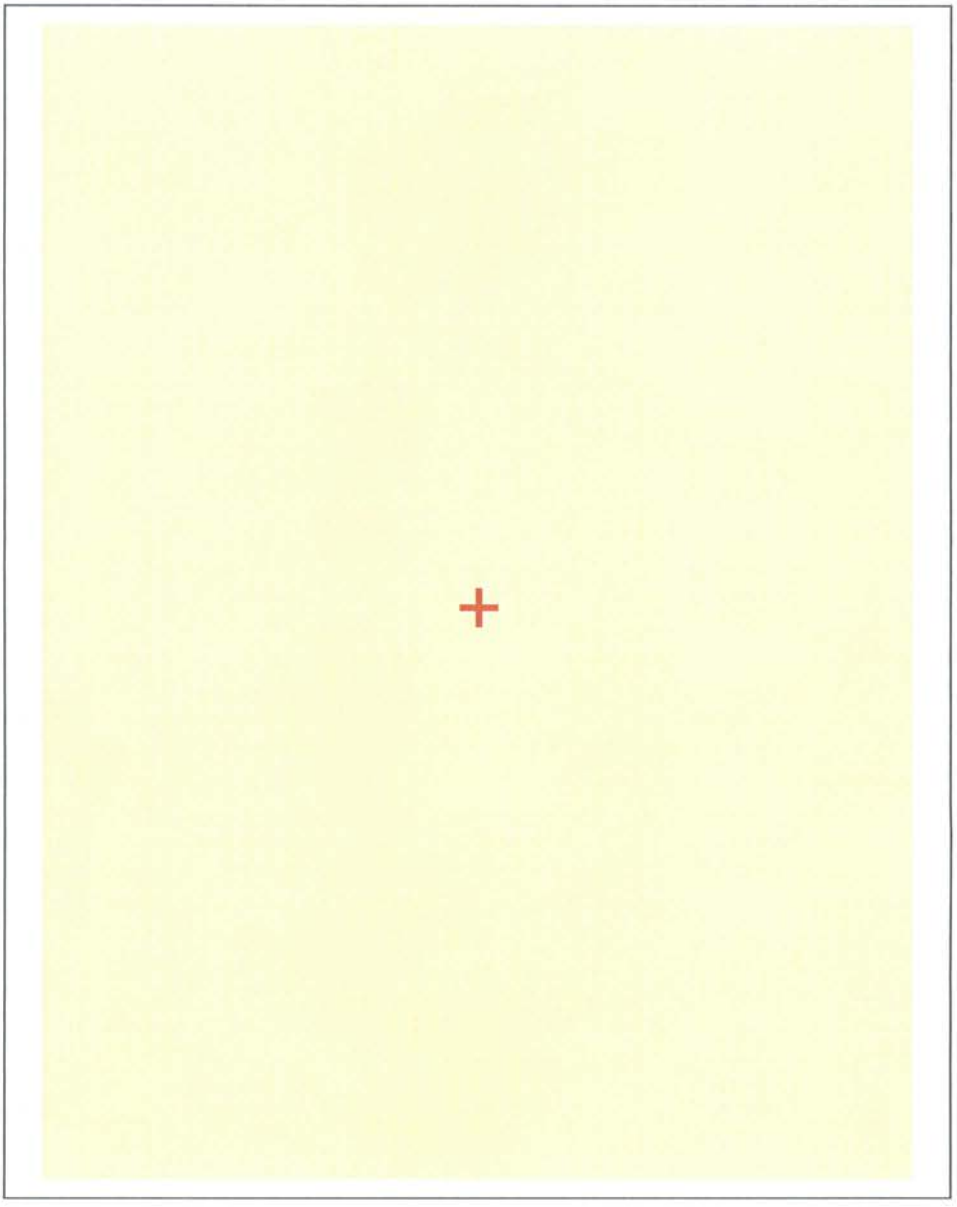
NAD 1983(92) (Meters)	N: 3,601,185	E: 627,036
NAD 1983(92) (Survey Feet)	N: 11,814,888	E: 2,057,202
NAD 1927 (Meters)	N: 3,600,982	E: 627,086
NAD 1927 (Survey Feet)	N: 11,814,223	E: 2,057,363

State Plane Coordinate System Zone: New Mexico East

NAD 1983(92) (Meters)	N: 171,037	E: 229,454
NAD 1983(92) (Survey Feet)	N: 561,143	E: 752,801
NAD 1927 (Meters)	N: 171,018	E: 216,902
NAD 1927 (Survey Feet)	N: 561,081	E: 711,620

NEW MEXICO OFFICE OF STATE ENGINEER

Locator Tool Report



WR File Number: CP-01151 Scale: 1:57,473

Northing/Easting: UTM83(92) (Meter): N: 3,601,185 E: 627,036

Northing/Easting: SPCS83(92) (Feet): N: 561,143 E: 752,801

GW Basin: Capitan

Print Date: 02/24/2017

Scott A. Verhines, P.E.
State Engineer

well Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 520275
File Nbr: CP 01151
Well File Nbr: CP 01151 POD1

Apr. 29, 2013

RANDALL T HICKS
CAZA OPERATING LLC
901 RIO GRANDE NW, F-142
ALBUQUERQUE, NM 87104

Greetings:

The above numbered permit was issued in your name on 01/22/2013.

The Well Record was received in this office on 04/24/2013, stating that it had been completed on 04/12/2013, and was a dry well. The well is to be plugged or capped or otherwise maintained in a manner satisfactory to the State Engineer.

Please note that another well can be drilled under this permit if the well is completed and the well log filed on or before 01/31/2014.

If you have any questions, please feel free to contact us.

Sincerely,

Yolanda Mendiola
(575)622-6521

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1		CP-1090

WELL OWNER NAME(S)	PHONE (OPTIONAL)
Devon Energy Corporation	405-318-4697

WELL OWNER MAILING ADDRESS	CITY	STATE	ZIP
6488 Seven Rivers Highway	Artesia	NM	88210

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	36	39.32	N
	LONGITUDE	104	4	58.53	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHJIP, RANGE) WHERE AVAILABLE

Unit Letter "N", Section 33, T19S, R29E

2. DRILLING & CASING INFORMATION

LICENSE NO.	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
1755	John Norris	Hungry Horse, LLC

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
7/15/2022	7/15/2022		55	NA

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): NA

DATE STATIC MEASURED:

DRILLING FLUID: ☑ AIR ☐ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

CHECK HERE IF PITLESS ADAPTER IS INSTALLED ☐

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
			No Casing				

OSE OUT AUG 5 2022 PM 1:42

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	55	6	Bentonite grout	10.8	tremie

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	CP-01090	POD NO.	1	TRN NO.	602836
LOCATION	20S.33E.31.1.1.2	WELL TAG ID NO.		PAGE 1 OF 2	

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	20	20	Sand	Y ✓ N	
20	30	10	Caliche	Y ✓ N	
30	35	5	Clay	Y ✓ N	
35	55	20	Gypsum	Y ✓ N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

☐ PUMP ☐ AIR LIFT ☐ BAILER ☑ OTHER – SPECIFY: Not tested

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION: Borehole was drilled as per NMOCD. Drill a 55' borehole, wait 72 hours, then gauge for presence of water. No water was present so borehole was plugged.

OSE DII AUG 5 2022 PM1:42

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Dean Parent

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:

John Norris — 7/25/2022

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO. CP-01090	POD NO. 1	TRN NO. 602836
LOCATION 20S.33E.31.1.1.2	WELL TAG ID NO.	PAGE 2 OF 2

ENSOLUM

APPENDIX B

Lithologic/Soil Sampling Log

ENSOLUM

	Sample Name: BH01	Date: 8/3/2023
	Site Name: Becknell State Com 003H	
	Incident Number: NAPP2318741823	
	Job Number: 03D2024207	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Peter Van Patten	Method: Hand Auger
Coordinates: 32.507572,-103.596686	Hole Diameter: 4"	Total Depth: 1'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
Damp	257	428	Y	BH01	0.5	0	CHHE	Caliche: Grey tan, yellow tan, subangular gravel to cobble grains, yellow staining, hydrocarbon odor
Damp	453	230	Y	BH01A	1	1	CHHE	SAA (same as above) Note: Hand auger refusal @ 1'

TD @ 1-foot bgs

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
COG Operating, LLC
Becknell State Com 003H
Incident Number NAPP2318741823

Photograph: 1 Date: 7/21/2023
Description: Well location sign
View: Northwest

Photograph: 2 Date: 7/21/2023
Description: Location of tear in liner identified during liner inspection activities, southeast.

Photograph: 3 Date: 8/3/2023
Description: Delineation activities
View: South

Photograph: 4 Date: 8/4/2023
Description: Patched liner
View: South

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/7/2023 12:31:30 PM

JOB DESCRIPTION

Becknell St Com 3H
SDG NUMBER 03D2024207

JOB NUMBER

890-4981-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

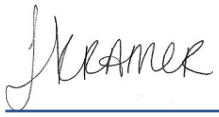
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



Generated
8/7/2023 12:31:30 PM

Authorized for release by
Jessica Kramer, Project Manager
Jessica.Kramer@et.eurofinsus.com
(432)704-5440

Client: Ensolum
Project/Site: Becknell St Com 3H

Laboratory Job ID: 890-4981-1
SDG: 03D2024207

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-4981-1
Project/Site: Becknell St Com 3H SDG: 03D2024207

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Job ID: 890-4981-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4981-1

Receipt
The samples were received on 7/21/2023 4:26 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS01 (890-4981-1), SS02 (890-4981-2), SS03 (890-4981-3) and SS04 (890-4981-4).

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-58733 and analytical batch 880-58692 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-59193 and analytical batch 880-59388 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-59388/20), (CCV 880-59388/31) and (CCV 880-59388/5). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-58446 and analytical batch 880-58488 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Client Sample ID: SS01

Date Collected: 07/21/23 09:30
Date Received: 07/21/23 16:26
Sample Depth: 0.5

Lab Sample ID: 890-4981-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:11	07/29/23 04:13	1
Toluene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:11	07/29/23 04:13	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:11	07/29/23 04:13	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		07/28/23 13:11	07/29/23 04:13	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		07/28/23 13:11	07/29/23 04:13	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		07/28/23 13:11	07/29/23 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*07/28/23 13:11*	*07/29/23 04:13*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*07/28/23 13:11*	*07/29/23 04:13*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			07/31/23 09:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			08/07/23 10:37	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		08/03/23 09:28	08/05/23 14:46	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		08/03/23 09:28	08/05/23 14:46	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		08/03/23 09:28	08/05/23 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*08/03/23 09:28*	*08/05/23 14:46*	*1*
o-Terphenyl	*101*		*70 - 130*	*08/03/23 09:28*	*08/05/23 14:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**282**		5.01		mg/Kg			07/26/23 00:19	1

Client Sample ID: SS02

Date Collected: 07/21/23 09:35
Date Received: 07/21/23 16:26
Sample Depth: 0.5

Lab Sample ID: 890-4981-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:11	07/29/23 04:33	1
Toluene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:11	07/29/23 04:33	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:11	07/29/23 04:33	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		07/28/23 13:11	07/29/23 04:33	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		07/28/23 13:11	07/29/23 04:33	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		07/28/23 13:11	07/29/23 04:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*07/28/23 13:11*	*07/29/23 04:33*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Client Sample ID: SS02

Lab Sample ID: 890-4981-2
Matrix: Solid
Date Collected: 07/21/23 09:35
Date Received: 07/21/23 16:26
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/28/23 13:11*	*07/29/23 04:33*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			07/31/23 09:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			08/07/23 10:37	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		08/03/23 09:28	08/05/23 15:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		08/03/23 09:28	08/05/23 15:08	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		08/03/23 09:28	08/05/23 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*128*		*70 - 130*	*08/03/23 09:28*	*08/05/23 15:08*	*1*
o-Terphenyl	*109*		*70 - 130*	*08/03/23 09:28*	*08/05/23 15:08*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**81.4**		4.97	mg/Kg			07/26/23 00:37	1

Client Sample ID: SS03

Lab Sample ID: 890-4981-3
Matrix: Solid
Date Collected: 07/21/23 09:40
Date Received: 07/21/23 16:26
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		07/28/23 13:11	07/29/23 04:54	1
Toluene	<0.00199	U	0.00199	mg/Kg		07/28/23 13:11	07/29/23 04:54	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		07/28/23 13:11	07/29/23 04:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		07/28/23 13:11	07/29/23 04:54	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		07/28/23 13:11	07/29/23 04:54	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		07/28/23 13:11	07/29/23 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*07/28/23 13:11*	*07/29/23 04:54*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*07/28/23 13:11*	*07/29/23 04:54*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			07/31/23 09:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			08/07/23 10:37	1

Client Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Client Sample ID: SS03

Lab Sample ID: 890-4981-3
Matrix: Solid
Date Collected: 07/21/23 09:40
Date Received: 07/21/23 16:26
Sample Depth: 0.5

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		08/03/23 09:28	08/05/23 15:53	1
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4		mg/Kg		08/03/23 09:28	08/05/23 15:53	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		08/03/23 09:28	08/05/23 15:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*115*		*70 - 130*	*08/03/23 09:28*	*08/05/23 15:53*	*1*
o-Terphenyl	*100*		*70 - 130*	*08/03/23 09:28*	*08/05/23 15:53*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**103**		4.95		mg/Kg			07/26/23 00:43	1

Client Sample ID: SS04

Lab Sample ID: 890-4981-4
Matrix: Solid
Date Collected: 07/21/23 09:45
Date Received: 07/21/23 16:26
Sample Depth: 0.5

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/29/23 05:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/29/23 05:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/29/23 05:14	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		07/28/23 13:11	07/29/23 05:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/29/23 05:14	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		07/28/23 13:11	07/29/23 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*07/28/23 13:11*	*07/29/23 05:14*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*07/28/23 13:11*	*07/29/23 05:14*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			07/31/23 09:55	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3		mg/Kg			08/07/23 10:37	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3		mg/Kg		08/03/23 09:28	08/05/23 16:15	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3		mg/Kg		08/03/23 09:28	08/05/23 16:15	1
OII Range Organics (Over C28-C36)	<50.3	U	50.3		mg/Kg		08/03/23 09:28	08/05/23 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*129*		*70 - 130*	*08/03/23 09:28*	*08/05/23 16:15*	*1*
o-Terphenyl	*113*		*70 - 130*	*08/03/23 09:28*	*08/05/23 16:15*	*1*

Client Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Client Sample ID: SS04

Date Collected: 07/21/23 09:45
Date Received: 07/21/23 16:26
Sample Depth: 0.5

Lab Sample ID: 890-4981-4

Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	111		4.98		mg/Kg			07/26/23 00:49	1

Surrogate Summary

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-31337-A-1-A MS	Matrix Spike	113	99
880-31337-A-1-B MSD	Matrix Spike Duplicate	120	101
890-4981-1	SS01	111	104
890-4981-2	SS02	122	107
890-4981-3	SS03	125	107
890-4981-4	SS04	109	101
LCS 880-58733/1-A	Lab Control Sample	117	100
LCSD 880-58733/2-A	Lab Control Sample Dup	118	101
MB 880-58702/5-A	Method Blank	98	90
MB 880-58733/5-A	Method Blank	95	88

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4979-A-1-D MS	Matrix Spike	125	92
890-4979-A-1-E MSD	Matrix Spike Duplicate	103	76
890-4981-1	SS01	122	101
890-4981-2	SS02	128	109
890-4981-3	SS03	115	100
890-4981-4	SS04	129	113
LCS 880-59193/2-A	Lab Control Sample	95	95
LCSD 880-59193/3-A	Lab Control Sample Dup	95	109
MB 880-59193/1-A	Method Blank	132 S1+	118

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-58702/5-A
Matrix: Solid
Analysis Batch: 58692

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58702

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/28/23 09:41	07/28/23 11:38	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 09:41	07/28/23 11:38	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 09:41	07/28/23 11:38	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/28/23 09:41	07/28/23 11:38	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 09:41	07/28/23 11:38	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/28/23 09:41	07/28/23 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/28/23 09:41*	*07/28/23 11:38*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*07/28/23 09:41*	*07/28/23 11:38*	*1*

Lab Sample ID: MB 880-58733/5-A
Matrix: Solid
Analysis Batch: 58692

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58733

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/28/23 22:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/28/23 22:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/28/23 22:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		07/28/23 13:11	07/28/23 22:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		07/28/23 13:11	07/28/23 22:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		07/28/23 13:11	07/28/23 22:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*07/28/23 13:11*	*07/28/23 22:22*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*07/28/23 13:11*	*07/28/23 22:22*	*1*

Lab Sample ID: LCS 880-58733/1-A
Matrix: Solid
Analysis Batch: 58692

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58733

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1001		mg/Kg		100	70 - 130		
Toluene			0.100	0.1110		mg/Kg		111	70 - 130		
Ethylbenzene			0.100	0.1047		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2076		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1044		mg/Kg		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*117*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-58733/2-A
Matrix: Solid
Analysis Batch: 58692

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58733

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09994		mg/Kg		100	70 - 130	0	35

QC Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-58733/2-A
Matrix: Solid
Analysis Batch: 58692

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58733

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1103		mg/Kg		110	70 - 130	1	35
Ethylbenzene			0.100	0.1031		mg/Kg		103	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2026		mg/Kg		101	70 - 130	2	35
o-Xylene			0.100	0.1025		mg/Kg		103	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-31337-A-1-A MS
Matrix: Solid
Analysis Batch: 58692

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58733

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.0996	0.06276	F1	mg/Kg		63	70 - 130
Toluene	<0.00199	U	0.0996	0.07130		mg/Kg		72	70 - 130
Ethylbenzene	<0.00199	U F1	0.0996	0.06345	F1	mg/Kg		64	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.1214	F1	mg/Kg		61	70 - 130
o-Xylene	<0.00199	U F1	0.0996	0.05993	F1	mg/Kg		60	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-31337-A-1-B MSD
Matrix: Solid
Analysis Batch: 58692

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 58733

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0998	0.07715		mg/Kg		77	70 - 130	21	35
Toluene	<0.00199	U	0.0998	0.08259		mg/Kg		83	70 - 130	15	35
Ethylbenzene	<0.00199	U F1	0.0998	0.06856	F1	mg/Kg		69	70 - 130	8	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1316	F1	mg/Kg		66	70 - 130	8	35
o-Xylene	<0.00199	U F1	0.0998	0.06611	F1	mg/Kg		66	70 - 130	10	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-59193/1-A
Matrix: Solid
Analysis Batch: 59388

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59193

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/03/23 09:28	08/05/23 08:24	1

QC Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-59193/1-A
Matrix: Solid
Analysis Batch: 59388

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59193

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/03/23 09:28	08/05/23 08:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/03/23 09:28	08/05/23 08:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*132*	*S1+*	*70 - 130*	*08/03/23 09:28*	*08/05/23 08:24*	*1*
o-Terphenyl	*118*		*70 - 130*	*08/03/23 09:28*	*08/05/23 08:24*	*1*

Lab Sample ID: LCS 880-59193/2-A
Matrix: Solid
Analysis Batch: 59388

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59193

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1000		mg/Kg		100	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	971.1		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*95*		*70 - 130*

Lab Sample ID: LCSD 880-59193/3-A
Matrix: Solid
Analysis Batch: 59388

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59193

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	975.9		mg/Kg		98	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	979.0		mg/Kg		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*109*		*70 - 130*

Lab Sample ID: 890-4979-A-1-D MS
Matrix: Solid
Analysis Batch: 59388

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59193

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	992	1031		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.3	U	992	1253		mg/Kg		124	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*125*		*70 - 130*
o-Terphenyl	*92*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-4979-A-1-E MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 59388 — **Prep Batch: 59193**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	992	1146		mg/Kg		113	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<50.3	U	992	1041		mg/Kg		103	70 - 130	18	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*103*		*70 - 130*
o-Terphenyl	*76*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-58446/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58488

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			07/25/23 22:10	1

Lab Sample ID: LCS 880-58446/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58488

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	231.5		mg/Kg		93	90 - 110		

Lab Sample ID: LCSD 880-58446/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58488

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	232.1		mg/Kg		93	90 - 110	0	20

Lab Sample ID: 890-4980-A-3-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58488

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	81.0	F1	248	301.0	F1	mg/Kg		89	90 - 110		

Lab Sample ID: 890-4980-A-3-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 58488

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	81.0	F1	248	302.4	F1	mg/Kg		89	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

GC VOA

Analysis Batch: 58692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Total/NA	Solid	8021B	58733
890-4981-2	SS02	Total/NA	Solid	8021B	58733
890-4981-3	SS03	Total/NA	Solid	8021B	58733
890-4981-4	SS04	Total/NA	Solid	8021B	58733
MB 880-58702/5-A	Method Blank	Total/NA	Solid	8021B	58702
MB 880-58733/5-A	Method Blank	Total/NA	Solid	8021B	58733
LCS 880-58733/1-A	Lab Control Sample	Total/NA	Solid	8021B	58733
LCSD 880-58733/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	58733
880-31337-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	58733
880-31337-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	58733

Prep Batch: 58702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-58702/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 58733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Total/NA	Solid	5035	
890-4981-2	SS02	Total/NA	Solid	5035	
890-4981-3	SS03	Total/NA	Solid	5035	
890-4981-4	SS04	Total/NA	Solid	5035	
MB 880-58733/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-58733/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-58733/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-31337-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-31337-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 58829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Total/NA	Solid	Total BTEX	
890-4981-2	SS02	Total/NA	Solid	Total BTEX	
890-4981-3	SS03	Total/NA	Solid	Total BTEX	
890-4981-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 59193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Total/NA	Solid	8015NM Prep	
890-4981-2	SS02	Total/NA	Solid	8015NM Prep	
890-4981-3	SS03	Total/NA	Solid	8015NM Prep	
890-4981-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-59193/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-59193/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-59193/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4979-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-4979-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 59388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Total/NA	Solid	8015B NM	59193

QC Association Summary

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

GC Semi VOA (Continued)

Analysis Batch: 59388 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-2	SS02	Total/NA	Solid	8015B NM	59193
890-4981-3	SS03	Total/NA	Solid	8015B NM	59193
890-4981-4	SS04	Total/NA	Solid	8015B NM	59193
MB 880-59193/1-A	Method Blank	Total/NA	Solid	8015B NM	59193
LCS 880-59193/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	59193
LCSD 880-59193/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	59193
890-4979-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	59193
890-4979-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	59193

Analysis Batch: 59496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Total/NA	Solid	8015 NM	
890-4981-2	SS02	Total/NA	Solid	8015 NM	
890-4981-3	SS03	Total/NA	Solid	8015 NM	
890-4981-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 58446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Soluble	Solid	DI Leach	
890-4981-2	SS02	Soluble	Solid	DI Leach	
890-4981-3	SS03	Soluble	Solid	DI Leach	
890-4981-4	SS04	Soluble	Solid	DI Leach	
MB 880-58446/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-58446/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-58446/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4980-A-3-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4980-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 58488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4981-1	SS01	Soluble	Solid	300.0	58446
890-4981-2	SS02	Soluble	Solid	300.0	58446
890-4981-3	SS03	Soluble	Solid	300.0	58446
890-4981-4	SS04	Soluble	Solid	300.0	58446
MB 880-58446/1-A	Method Blank	Soluble	Solid	300.0	58446
LCS 880-58446/2-A	Lab Control Sample	Soluble	Solid	300.0	58446
LCSD 880-58446/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	58446
890-4980-A-3-B MS	Matrix Spike	Soluble	Solid	300.0	58446
890-4980-A-3-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	58446

Lab Chronicle

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Client Sample ID: SS01
Date Collected: 07/21/23 09:30
Date Received: 07/21/23 16:26

Lab Sample ID: 890-4981-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	58733	07/28/23 13:11	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58692	07/29/23 04:13	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58829	07/31/23 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59496	08/07/23 10:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	59193	08/03/23 09:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59388	08/05/23 14:46	SM	EET MID
Soluble	Leach	DI Leach			4.99 g	50 mL	58446	07/25/23 09:41	KS	EET MID
Soluble	Analysis	300.0		1			58488	07/26/23 00:19	CH	EET MID

Client Sample ID: SS02
Date Collected: 07/21/23 09:35
Date Received: 07/21/23 16:26

Lab Sample ID: 890-4981-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	58733	07/28/23 13:11	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58692	07/29/23 04:33	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58829	07/31/23 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59496	08/07/23 10:37	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	59193	08/03/23 09:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59388	08/05/23 15:08	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	58446	07/25/23 09:41	KS	EET MID
Soluble	Analysis	300.0		1			58488	07/26/23 00:37	CH	EET MID

Client Sample ID: SS03
Date Collected: 07/21/23 09:40
Date Received: 07/21/23 16:26

Lab Sample ID: 890-4981-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	58733	07/28/23 13:11	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58692	07/29/23 04:54	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58829	07/31/23 09:55	AJ	EET MID
Total/NA	Analysis	8015 NM		1			59496	08/07/23 10:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.93 g	10 mL	59193	08/03/23 09:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59388	08/05/23 15:53	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	58446	07/25/23 09:41	KS	EET MID
Soluble	Analysis	300.0		1			58488	07/26/23 00:43	CH	EET MID

Client Sample ID: SS04
Date Collected: 07/21/23 09:45
Date Received: 07/21/23 16:26

Lab Sample ID: 890-4981-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	58733	07/28/23 13:11	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	58692	07/29/23 05:14	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			58829	07/31/23 09:55	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Client Sample ID: SS04

Date Collected: 07/21/23 09:45
Date Received: 07/21/23 16:26

Lab Sample ID: 890-4981-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			59496	08/07/23 10:37	SM	EET MID
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	59193	08/03/23 09:28	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	59388	08/05/23 16:15	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	58446	07/25/23 09:41	KS	EET MID
Soluble	Analysis	300.0		1			58488	07/26/23 00:49	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: Becknell St Com 3H

Job ID: 890-4981-1
SDG: 03D2024207

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4981-1	SS01	Solid	07/21/23 09:30	07/21/23 16:26	0.5
890-4981-2	SS02	Solid	07/21/23 09:35	07/21/23 16:26	0.5
890-4981-3	SS03	Solid	07/21/23 09:40	07/21/23 16:26	0.5
890-4981-4	SS04	Solid	07/21/23 09:45	07/21/23 16:26	0.5

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Kalei Jennings
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com, kjennings@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Becknell St Com 3H	Turn Around	
Project Number:	03D2024207	☑ Routine ☐ Rush	
Project Location:	32.5073,-103.5965	Due Date:	
Sampler's Name:	Peter Van Patten	TAT starts the day received by the lab, if received by 4:30pm	
PO #:			

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No	Thermometer ID:	TVN-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.6	
Total Containers:		Corrected Temperature:	2.4	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)
SS01	Soil	7/21/2023	930	0.5'	Comp	1		x	x	x
SS02	Soil	7/21/2023	935	0.5'	Comp	1		x	x	x
SS03	Soil	7/21/2023	940	0.5'	Comp	1		x	x	x
SS04	Soil	7/21/2023	945	0.5'	Comp	1		x	x	x

Parameters

ANALYSIS REQUEST

890-4981 Chain of Custody

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2S0_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten	Clare Gray	7-21-23 1602	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4981-1
SDG Number: 03D2024207

Login Number: 4981
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4981-1
SDG Number: 03D2024207

Login Number: 4981
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 07/25/23 10:57 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Hadlie Green
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 8/16/2023 10:29:03 AM

JOB DESCRIPTION

Becknell State Com 003H
SDG NUMBER 03D2024207

JOB NUMBER

890-5031-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

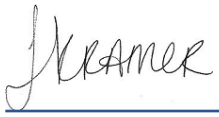
Eurofins Carlsbad

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Client: Ensolum
Project/Site: Becknell State Com 003H

Laboratory Job ID: 890-5031-1
SDG: 03D2024207

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-5031-1
Project/Site: Becknell State Com 003H SDG: 03D2024207

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Job ID: 890-5031-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5031-1

Receipt
The samples were received on 8/3/2023 4:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: BH01 (890-5031-1) and BH01A (890-5031-2).

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-32031-A-21-A) and (880-32031-A-21-B MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The continuing calibration verification (CCV) associated with batch 880-60233 recovered below the lower control limit for Diesel Range Organics (Over C10-C28). An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-60233/5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-59457 and analytical batch 880-59519 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Client Sample ID: BH01

Date Collected: 08/03/23 09:15
Date Received: 08/03/23 16:05
Sample Depth: 0.5

Lab Sample ID: 890-5031-1
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		08/10/23 11:41	08/11/23 12:07	1
Toluene	**0.0171**		0.00198		mg/Kg		08/10/23 11:41	08/11/23 12:07	1
Ethylbenzene	**0.0281**		0.00198		mg/Kg		08/10/23 11:41	08/11/23 12:07	1
m-Xylene & p-Xylene	**0.0801**		0.00396		mg/Kg		08/10/23 11:41	08/11/23 12:07	1
o-Xylene	**0.0320**		0.00198		mg/Kg		08/10/23 11:41	08/11/23 12:07	1
Xylenes, Total	**0.112**		0.00396		mg/Kg		08/10/23 11:41	08/11/23 12:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*171*	*S1+*	*70 - 130*	*08/10/23 11:41*	*08/11/23 12:07*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*08/10/23 11:41*	*08/11/23 12:07*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.157**		0.00396		mg/Kg			08/11/23 14:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**2020**		50.1		mg/Kg			08/16/23 11:05	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	**96.0**		50.1		mg/Kg		08/15/23 09:19	08/15/23 19:47	1
Diesel Range Organics (Over C10-C28)	**1920**		50.1		mg/Kg		08/15/23 09:19	08/15/23 19:47	1
Oil Range Organics (Over C28-C36)	<50.1	U	50.1		mg/Kg		08/15/23 09:19	08/15/23 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*80*		*70 - 130*	*08/15/23 09:19*	*08/15/23 19:47*	*1*
o-Terphenyl	*77*		*70 - 130*	*08/15/23 09:19*	*08/15/23 19:47*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**337**		5.02		mg/Kg			08/08/23 14:45	1

Client Sample ID: BH01A

Date Collected: 08/03/23 09:30
Date Received: 08/03/23 16:05
Sample Depth: 1

Lab Sample ID: 890-5031-2
Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		08/10/23 11:41	08/11/23 12:28	1
Toluene	<0.00201	U	0.00201		mg/Kg		08/10/23 11:41	08/11/23 12:28	1
Ethylbenzene	**0.00866**		0.00201		mg/Kg		08/10/23 11:41	08/11/23 12:28	1
m-Xylene & p-Xylene	**0.00902**		0.00402		mg/Kg		08/10/23 11:41	08/11/23 12:28	1
o-Xylene	**0.00868**		0.00201		mg/Kg		08/10/23 11:41	08/11/23 12:28	1
Xylenes, Total	**0.0177**		0.00402		mg/Kg		08/10/23 11:41	08/11/23 12:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*		*70 - 130*	*08/10/23 11:41*	*08/11/23 12:28*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Client Sample ID: BH01A

Date Collected: 08/03/23 09:30
Date Received: 08/03/23 16:05
Sample Depth: 1

Lab Sample ID: 890-5031-2

Matrix: Solid

Method: SW846 8021B - Volatile Organic Compounds (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*08/10/23 11:41*	*08/11/23 12:28*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0264**		0.00402		mg/Kg			08/11/23 14:31	1

Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**735**		49.6		mg/Kg			08/16/23 11:05	1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.6	U	49.6		mg/Kg		08/15/23 09:19	08/15/23 20:13	1
Diesel Range Organics (Over C10-C28)	**735**		49.6		mg/Kg		08/15/23 09:19	08/15/23 20:13	1
OII Range Organics (Over C28-C36)	<49.6	U	49.6		mg/Kg		08/15/23 09:19	08/15/23 20:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*87*		*70 - 130*	*08/15/23 09:19*	*08/15/23 20:13*	*1*
o-Terphenyl	*86*		*70 - 130*	*08/15/23 09:19*	*08/15/23 20:13*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**406**		4.99		mg/Kg			08/08/23 14:52	1

Surrogate Summary

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-31825-A-1-C MS	Matrix Spike	121	118
880-31825-A-1-D MSD	Matrix Spike Duplicate	122	111
880-31843-A-1-G MS	Matrix Spike	98	95
880-31843-A-1-H MSD	Matrix Spike Duplicate	98	89
890-5031-1	BH01	171 S1+	118
890-5031-2	BH01A	130	106
LCS 880-59852/1-A	Lab Control Sample	125	113
LCS 880-59853/1-A	Lab Control Sample	103	93
LCSD 880-59852/2-A	Lab Control Sample Dup	129	116
LCSD 880-59853/2-A	Lab Control Sample Dup	84	90
MB 880-59833/5-A	Method Blank	71	97
MB 880-59852/5-A	Method Blank	69 S1-	83
MB 880-59853/5-A	Method Blank	95	117

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-32031-A-21-B MS	Matrix Spike	82	64 S1-
880-32031-A-21-C MSD	Matrix Spike Duplicate	96	79
890-5031-1	BH01	80	77
890-5031-2	BH01A	87	86
LCS 880-60248/2-A	Lab Control Sample	95	87
LCSD 880-60248/3-A	Lab Control Sample Dup	87	80
MB 880-60248/1-A	Method Blank	80	81

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-59833/5-A
Matrix: Solid
Analysis Batch: 59869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59833

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/10/23 09:33	08/10/23 17:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/10/23 09:33	08/10/23 17:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/10/23 09:33	08/10/23 17:04	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/10/23 09:33	08/10/23 17:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/10/23 09:33	08/10/23 17:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/10/23 09:33	08/10/23 17:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*71*		*70 - 130*	*08/10/23 09:33*	*08/10/23 17:04*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*08/10/23 09:33*	*08/10/23 17:04*	*1*

Lab Sample ID: MB 880-59852/5-A
Matrix: Solid
Analysis Batch: 59869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59852

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:41	08/11/23 03:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:41	08/11/23 03:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:41	08/11/23 03:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/10/23 11:41	08/11/23 03:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:41	08/11/23 03:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/10/23 11:41	08/11/23 03:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*08/10/23 11:41*	*08/11/23 03:40*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*08/10/23 11:41*	*08/11/23 03:40*	*1*

Lab Sample ID: LCS 880-59852/1-A
Matrix: Solid
Analysis Batch: 59869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59852

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.09269		mg/Kg		93	70 - 130		
Toluene			0.100	0.1027		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.1049		mg/Kg		105	70 - 130		
m-Xylene & p-Xylene			0.200	0.2341		mg/Kg		117	70 - 130		
o-Xylene			0.100	0.1157		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: LCSD 880-59852/2-A
Matrix: Solid
Analysis Batch: 59869

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59852

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09315		mg/Kg		93	70 - 130	0	35

QC Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-59852/2-A
Matrix: Solid
Analysis Batch: 59869

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59852

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1021		mg/Kg		102	70 - 130	1	35
Ethylbenzene			0.100	0.1065		mg/Kg		106	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.2378		mg/Kg		119	70 - 130	2	35
o-Xylene			0.100	0.1178		mg/Kg		118	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 880-31825-A-1-C MS
Matrix: Solid
Analysis Batch: 59869

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59852

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.0996	0.08755		mg/Kg		87	70 - 130
Toluene	<0.00199	U	0.0996	0.08692		mg/Kg		87	70 - 130
Ethylbenzene	<0.00199	U	0.0996	0.08582		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1787		mg/Kg		89	70 - 130
o-Xylene	<0.00199	U	0.0996	0.08562		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*

Lab Sample ID: 880-31825-A-1-D MSD
Matrix: Solid
Analysis Batch: 59869

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 59852

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.09473		mg/Kg		93	70 - 130	8	35
Toluene	<0.00199	U	0.101	0.09766		mg/Kg		97	70 - 130	12	35
Ethylbenzene	<0.00199	U	0.101	0.09844		mg/Kg		98	70 - 130	14	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1972		mg/Kg		97	70 - 130	10	35
o-Xylene	<0.00199	U	0.101	0.09325		mg/Kg		92	70 - 130	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: MB 880-59853/5-A
Matrix: Solid
Analysis Batch: 59911

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59853

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:50	08/11/23 13:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:50	08/11/23 13:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:50	08/11/23 13:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/10/23 11:50	08/11/23 13:16	1

QC Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-59853/5-A
Matrix: Solid
Analysis Batch: 59911

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 59853

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/10/23 11:50	08/11/23 13:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/10/23 11:50	08/11/23 13:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*08/10/23 11:50*	*08/11/23 13:16*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*08/10/23 11:50*	*08/11/23 13:16*	*1*

Lab Sample ID: LCS 880-59853/1-A
Matrix: Solid
Analysis Batch: 59911

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 59853

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1116		mg/Kg		112	70 - 130		
Toluene			0.100	0.1097		mg/Kg		110	70 - 130		
Ethylbenzene			0.100	0.1093		mg/Kg		109	70 - 130		
m-Xylene & p-Xylene			0.200	0.2377		mg/Kg		119	70 - 130		
o-Xylene			0.100	0.1119		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-59853/2-A
Matrix: Solid
Analysis Batch: 59911

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 59853

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1061		mg/Kg		106	70 - 130	5	35
Toluene			0.100	0.09822		mg/Kg		98	70 - 130	11	35
Ethylbenzene			0.100	0.09026		mg/Kg		90	70 - 130	19	35
m-Xylene & p-Xylene			0.200	0.1847		mg/Kg		92	70 - 130	25	35
o-Xylene			0.100	0.08745		mg/Kg		87	70 - 130	25	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: 880-31843-A-1-G MS
Matrix: Solid
Analysis Batch: 59911

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59853

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U	0.0996	0.1080		mg/Kg		108	70 - 130		
Toluene	<0.00199	U	0.0996	0.1013		mg/Kg		102	70 - 130		
Ethylbenzene	<0.00199	U	0.0996	0.09650		mg/Kg		97	70 - 130		
m-Xylene & p-Xylene	<0.00398	U	0.199	0.2039		mg/Kg		102	70 - 130		
o-Xylene	<0.00199	U	0.0996	0.09678		mg/Kg		97	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-31843-A-1-G MS
Matrix: Solid
Analysis Batch: 59911

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 59853

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-31843-A-1-H MSD
Matrix: Solid
Analysis Batch: 59911

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 59853

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.101	0.09540		mg/Kg		95	70 - 130	12	35
Toluene	<0.00199	U	0.101	0.09308		mg/Kg		92	70 - 130	8	35
Ethylbenzene	<0.00199	U	0.101	0.09115		mg/Kg		90	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U	0.202	0.1948		mg/Kg		97	70 - 130	5	35
o-Xylene	<0.00199	U	0.101	0.09343		mg/Kg		93	70 - 130	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-60248/1-A
Matrix: Solid
Analysis Batch: 60233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 60248

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		08/15/23 08:00	08/15/23 08:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/15/23 08:00	08/15/23 08:28	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/15/23 08:00	08/15/23 08:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*80*		*70 - 130*	*08/15/23 08:00*	*08/15/23 08:28*	*1*
o-Terphenyl	*81*		*70 - 130*	*08/15/23 08:00*	*08/15/23 08:28*	*1*

Lab Sample ID: LCS 880-60248/2-A
Matrix: Solid
Analysis Batch: 60233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 60248

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	877.7		mg/Kg		88	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	833.7		mg/Kg		83	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	*95*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 880-60248/3-A
Matrix: Solid
Analysis Batch: 60233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 60248

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	800.9		mg/Kg		80	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	800.6		mg/Kg		80	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*87*		*70 - 130*
o-Terphenyl	*80*		*70 - 130*

Lab Sample ID: 880-32031-A-21-B MS
Matrix: Solid
Analysis Batch: 60233

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 60248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	998	766.0		mg/Kg		74	70 - 130
Diesel Range Organics (Over C10-C28)	<50.2	U	998	723.2		mg/Kg		70	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*82*		*70 - 130*
o-Terphenyl	*64*	*S1-*	*70 - 130*

Lab Sample ID: 880-32031-A-21-C MSD
Matrix: Solid
Analysis Batch: 60233

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 60248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.2	U	998	896.2		mg/Kg		87	70 - 130	16	20
Diesel Range Organics (Over C10-C28)	<50.2	U	998	884.2		mg/Kg		86	70 - 130	20	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*96*		*70 - 130*
o-Terphenyl	*79*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-59457/1-A
Matrix: Solid
Analysis Batch: 59519

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/08/23 13:57	1

QC Sample Results

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-59457/2-A
Matrix: Solid
Analysis Batch: 59519

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	241.5		mg/Kg		97	90 - 110		

Lab Sample ID: LCSD 880-59457/3-A
Matrix: Solid
Analysis Batch: 59519

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	239.9		mg/Kg		96	90 - 110	1	20

Lab Sample ID: 880-31722-A-1-G MS
Matrix: Solid
Analysis Batch: 59519

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	232	F1	248	406.9	F1	mg/Kg		71	90 - 110		

Lab Sample ID: 880-31722-A-1-H MSD
Matrix: Solid
Analysis Batch: 59519

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	232	F1	248	408.3	F1	mg/Kg		71	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

GC VOA

Prep Batch: 59833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-59833/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 59852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Total/NA	Solid	5035	
890-5031-2	BH01A	Total/NA	Solid	5035	
MB 880-59852/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-59852/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-59852/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-31825-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-31825-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 59853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-59853/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-59853/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-59853/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-31843-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
880-31843-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 59869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Total/NA	Solid	8021B	59852
890-5031-2	BH01A	Total/NA	Solid	8021B	59852
MB 880-59833/5-A	Method Blank	Total/NA	Solid	8021B	59833
MB 880-59852/5-A	Method Blank	Total/NA	Solid	8021B	59852
LCS 880-59852/1-A	Lab Control Sample	Total/NA	Solid	8021B	59852
LCSD 880-59852/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	59852
880-31825-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	59852
880-31825-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	59852

Analysis Batch: 59911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-59853/5-A	Method Blank	Total/NA	Solid	8021B	59853
LCS 880-59853/1-A	Lab Control Sample	Total/NA	Solid	8021B	59853
LCSD 880-59853/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	59853
880-31843-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	59853
880-31843-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	59853

Analysis Batch: 59952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Total/NA	Solid	Total BTEX	
890-5031-2	BH01A	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 60233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Total/NA	Solid	8015B NM	60248
890-5031-2	BH01A	Total/NA	Solid	8015B NM	60248
MB 880-60248/1-A	Method Blank	Total/NA	Solid	8015B NM	60248

QC Association Summary

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

GC Semi VOA (Continued)

Analysis Batch: 60233 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-60248/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	60248
LCSD 880-60248/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	60248
880-32031-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	60248
880-32031-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	60248

Prep Batch: 60248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Total/NA	Solid	8015NM Prep	
890-5031-2	BH01A	Total/NA	Solid	8015NM Prep	
MB 880-60248/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-60248/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-60248/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-32031-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-32031-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 60380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Total/NA	Solid	8015 NM	
890-5031-2	BH01A	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 59457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Soluble	Solid	DI Leach	
890-5031-2	BH01A	Soluble	Solid	DI Leach	
MB 880-59457/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-59457/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-59457/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-31722-A-1-G MS	Matrix Spike	Soluble	Solid	DI Leach	
880-31722-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 59519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5031-1	BH01	Soluble	Solid	300.0	59457
890-5031-2	BH01A	Soluble	Solid	300.0	59457
MB 880-59457/1-A	Method Blank	Soluble	Solid	300.0	59457
LCS 880-59457/2-A	Lab Control Sample	Soluble	Solid	300.0	59457
LCSD 880-59457/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	59457
880-31722-A-1-G MS	Matrix Spike	Soluble	Solid	300.0	59457
880-31722-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	59457

Lab Chronicle

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Client Sample ID: BH01

Date Collected: 08/03/23 09:15
Date Received: 08/03/23 16:05

Lab Sample ID: 890-5031-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	59852	08/10/23 11:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59869	08/11/23 12:07	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59952	08/11/23 14:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			60380	08/16/23 11:05	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	60248	08/15/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60233	08/15/23 19:47	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	59457	08/07/23 09:42	KS	EET MID
Soluble	Analysis	300.0		1			59519	08/08/23 14:45	CH	EET MID

Client Sample ID: BH01A

Date Collected: 08/03/23 09:30
Date Received: 08/03/23 16:05

Lab Sample ID: 890-5031-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	59852	08/10/23 11:41	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	59869	08/11/23 12:28	SM	EET MID
Total/NA	Analysis	Total BTEX		1			59952	08/11/23 14:31	AJ	EET MID
Total/NA	Analysis	8015 NM		1			60380	08/16/23 11:05	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	60248	08/15/23 09:19	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60233	08/15/23 20:13	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	59457	08/07/23 09:42	KS	EET MID
Soluble	Analysis	300.0		1			59519	08/08/23 14:52	CH	EET MID

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-23-26	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Ensolum
Project/Site: Becknell State Com 003H

Job ID: 890-5031-1
SDG: 03D2024207

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5031-1	BH01	Solid	08/03/23 09:15	08/03/23 16:05	0.5
890-5031-2	BH01A	Solid	08/03/23 09:30	08/03/23 16:05	1

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Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300
Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334
EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Work Order No: _____

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Project Manager:	Hadlie Green	Bill to: (if different)	Hadlie Green
Company Name:	Ensolum, LLC	Company Name:	Ensolum, LLC
Address:	601 N Marienfeld St Suite 400	Address:	601 N Marienfeld St Suite 400
City, State ZIP:	Midland, TX 79701	City, State ZIP:	Midland, TX 79701
Phone:	432-557-8895	Email:	hgreen@ensolum.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Becknell State Com 003H	Turn Around	☑ Routine ☐ Rush
Project Number:	03D2024207	Due Date:	
Project Location:	32.5073,-103.5965	TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Peter Van Patten		
PO #:			

SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	Yes No	
Samples Received Intact:	Yes No		Thermometer ID:	IR#007	
Cooler Custody Seals:	Yes No N/A		Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A		Temperature Reading:	6.0	
Total Containers:			Corrected Temperature:	5.8	

ANALYSIS REQUEST

Preservative Codes

None: NO DI Water: H_2O
Cool: Cool MeOH: Me
HCL: HC HNO_3: HN
H_2SO_4: H_2 NaOH: Na
H_3PO_4: HP
$NaHSO_4$: NABIS
$Na_2S_2O_3$: $NaSO_3$
Zn Acetate+NaOH: Zn
NaOH+Ascorbic Acid: SAPC

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 300.0)	TPH (8015)	BTEX (8021)	Sample Comments
BH01	Soil	8/3/2023	915	0.5	Comp	1		x	x	x	
BH01A	Soil	8/3/2023	930	1	Comp	1		x	x	x	

890-5031 Chain of Custody

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO_2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of $85.00 will be applied to each project and a charge of $5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Peter Van Patten		8.3.23 1605	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5031-1
SDG Number: 03D2024207

Login Number: 5031
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5031-1
SDG Number: 03D2024207

Login Number: 5031
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 08/07/23 09:38 AM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

ENSOLUM

APPENDIX E

NMOCD Notifications

From: Buchanan, Michael, EMNRD
To: Hadlie Green; Enviro, OCD, EMNRD; Velez, Nelson, EMNRD
Cc: Kalei Jennings; Peter Van Patten
Subject: RE: [EXTERNAL] COG - Containment Inspection - Becknell St Com 3H (Spill Date 6/25/2023)
Date: Wednesday, July 5, 2023 3:26:06 PM
Attachments: image005.jpg
image006.png
image007.png
image008.png
image009.png

[**EXTERNAL EMAIL**]

Good afternoon,

Thank you for the notification. Please include a copy of this and all notifications in the C-141, remedial and/or closure reports to ensure the notifications are documented in the project file.

Regards,

Mike Buchanan ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
8801 Horizon Blvd. NE | Albuquerque, NM 87113
| michael.buchanan@emnrd.nm.gov
http://www.emnrd.nm.gov/ocd

From: Hadlie Green <hgreen@ensolum.com>
Sent: Wednesday, July 5, 2023 1:48 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Kalei Jennings <kjennings@ensolum.com>; Peter Van Patten <pvanpatten@ensolum.com>
Subject: [EXTERNAL] COG - Containment Inspection - Becknell St Com 3H (Spill Date 6/25/2023)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

To Whom It May Concern,

Below is an email notification for liner inspection at COG Operating, LLC (COG) Becknell St Com 3H (Spill Date 6/25/2023). This is a notification that Ensolum is scheduled to inspect this lined containment on behalf of COG on Friday, July 14, 2023. Please call with any questions or concerns.

GPS: 32.5073, -103.5965

Thank you,

Hadlie Green
Project Geologist
432-557-8895
hgreen@ensolum.com
Ensolum, LLC

ENSOLUM

APPENDIX F

Final C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAPP2318741823
District RP	
Facility ID	fAPP2202658800
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Jacob Laird	Contact Telephone	(575) 703-5482
Contact email	Jacob.Laird@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2318741823
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.5073 Longitude -103.5965

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Becknell State Com 003H	Site Type	Tank Battery
Date Release Discovered	June 25, 2023	API# *(if applicable)*	30-025-41299

Unit Letter	Section	Township	Range	County
K	05	21S	33E	Lea

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 138.2209	Volume Recovered (bbls) 116
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a loose hammer union.
The release occurred within a gravel line facility. A vacuum truck was dispatched to remove all freestanding fluids. Evaluation will have the spill area evaluated for any possible impact from the release.

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318741823
District RP	
Facility ID	fAPP2202658800
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The volume released was greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice was given by Jacqui Harris via email on June 26, 2023 at 10:59 AM to ocd.enviro@state.nm.us.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 7/6/2023

email: Brittany.Esparza@ConocoPhillips.com Telephone: (432) 221-0398

OCD Only

Received by: Shelly Wells Date: 7/6/2023

Spill Calculation - On-Pad Surface Pool Spill

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Average Depth (in.)	Estimated *Pool* Area (sq. ft.)	Estimated volume of each pool area (bbl.)	Penetration allowance (ft.)	Total Estimated Volume of Spill (bbl.)
Rectangle A	28	36	6.0	1008.00	89.71	0.03	91.95
Rectangle B	28	10	4.0	280.00	16.61	0.02	16.89
Rectangle C	20	6	2.0	120.00	3.56	0.01	3.59
Rectangle D	21	15	4.0	315.00	18.69	0.02	19.00
Rectangle E	28	15	2.0	420.00	12.46	0.01	12.56
Rectangle F	10	5	2.0	50.00	1.48	0.01	1.50
Rectangle G				0.00	0.00	0.00	0.00
Rectangle H				0.00	0.00	0.00	0.00
Rectangle I				0.00	0.00	0.00	0.00
Rectangle J				0.00	0.00	0.00	0.00

Total Volume Release, Soil not impacted: 138.2209

District I
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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

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 236590
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	7/6/2023

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318741823
District RP	
Facility ID	fAPP2202658800
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	51-100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318741823
District RP	
Facility ID	fAPP2202658800
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: Jacob Laird_____ Date: _____9/14/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: ___575-703-5482_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318741823
District RP	
Facility ID	fAPP2202658800
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: __Jacob Laird_____ Title: __Environmental Engineer_____

Signature: _Jacob Laird_____ Date: _____9/14/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: __575-703-5482_____

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2318741823
District RP	
Facility ID	fAPP2202658800
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: __Jacob Laird_____ Title: _Environmental Engineer_____

Signature: Jacob Laird Date: _____12/8/2023_____

email: __Jacob.Laird@conocophillips.com_____ Telephone: ___575-703-5482_____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Scott Rodgers Date: _12/11/2023_____

Printed Name: Scott Rodgers_____ __ Title: Environmental Specialist Advanced_____

Remediation has met 19.15.29 NMAC requirements. Soil impacts exceeding the reclamation standards have been left in place and are required to meet 19.15.29.13D (1) NMAC once the site is no longer reasonably needed for production or subsequent drilling operations.

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 266257

COMMENTS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 266257
	Action Type: [C-141] Release Corrective Action (C-141)

COMMENTS

Created By	Comment	Comment Date
scott.rodgers	Remediation has met 19.15.29 NMAC requirements. Soil impacts exceeding the reclamation standards have been left in place and are required to meet 19.15.29.13D (1) NMAC once the site is no longer reasonably needed for production or subsequent drilling operations.	12/11/2023

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State of New Mexico
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CONDITIONS

Action 266257

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 266257
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
scott.rodgers	None	12/11/2023