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Remediation and Closure Report

Wersell Federal #001
Incident# nAB1515334420
Eddy County, New Mexico

Prepared For:

Cimarex Energy Co. of Colorado
600 Marienfeld St.
Midland, TX 79701

Prepared By:

H&R Enterprises, LLC
5120 W. Kansas St.
Hobbs, New Mexico 88242

May 19, 2023

Mrs. Jennifer Nobui
NMOCD
1220 S. St. Francis Dr.
Santa Fe, NM 87505

Subject: **Remediation and Closure Report**
Wersell Federal #001
Eddy County, NM

Dear Mrs. Nobui,

Cimarex Energy Co. of Colorado has contracted H&R Enterprises (H&R) to perform site assessment and remediation services at the above-referenced location. The results of our site assessment and remediation activities are contained herein.

Site Information

The Wersell Federal #001 is located approximately 2.4 miles East of Carlsbad, New Mexico. The legal location for this release is Unit Letter C, Section 04, Township 22 South and Range 27 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.42693 North and -104.19662 West. Site plans are presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of Upton gravelly loam, 0 to 9 percent slopes. The referenced soil data is attached in [Appendix II](#). Drainage courses in this area are typically dry. The project site is not located in a high Karst potential area (Karst Map, [Appendix I](#)).

Groundwater and Site Characterization

The New Mexico Office of the State Engineer web site indicates that the nearest reported depth to groundwater is 55-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to the groundwater in Table I, New Mexico Oil Conservation Division (NMOCD) Rule 19.15.29, NMAC.

Approximate Depth to Groundwater	55 Feet/BGS
----------------------------------	-------------

<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of any continuously flowing watercourse or any other significant watercourse
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 200 feet of any lakebed, sinkhole, or a playa lake
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet from an occupied permanent residence, school, hospital, institution, or church
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 1000 feet of any freshwater well or spring
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within incorporated municipal boundaries or within a defined municipal freshwater well field covered under a municipal ordinance adopted pursuant to Section 3-2703 NMSA 1978
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within 300 feet of a wetland
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within the area overlying a subsurface mine
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within an unstable area
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Within a 100-year floodplain

As this is a remediation in an area with no current groundwater data, the closure criteria for this site are as follows:

Table I			
Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride **	EPA 300.0 or SM4500 CIB	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Incident Description

On May 28, 2015, it was discovered that corrosion on a pipe fitting attaching two flow lines caused the release of 20 barrels (bbls) of produced water behind the containment. A total of 0 bbls of produced water were recovered.

Site Assessment and Remediation Activities

H&R mobilized personnel to begin site assessment, sampling, and remediation activities of the area where the old containment was. Grab samples were obtained by way of test trenching the release area behind the old containment. Samples collected were then transported to Eurofins Laboratory for analysis, and the results of that analysis are presented in the following data table. Initial site assessment sampling locations are illustrated on Site Assessment Map, [Appendix I](#). Before, during, and after photographs of the location are attached in [Appendix IV](#). Complete laboratory reports can be found in [Appendix V](#).

Table 1: Initial Soil Samples Analysis

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	100 mg/kg			100 mg/kg	600 mg/kg
TT-1	4/20/2023	0-1'	ND	ND	ND	ND	ND	0	1780
		2' R	ND	ND	ND	ND	ND	0	80.4
H-1	4/20/2023	0-1'	ND	ND	ND	ND	ND	0	46.6
H-2	4/20/2023	0-1'	ND	ND	ND	ND	ND	0	48.4
H-3	4/20/2023	0-1'	ND	ND	ND	ND	ND	0	43.7
H-4	4/20/2023	0-1'	ND	ND	ND	ND	ND	0	34.5

ND = Analyte Not Detected TT = Vertical Test Trench H = Horizontal R = Refusal w/backhoe

Based on the results of our site assessment and upon client authorization, excavation activities of the impacted area behind the old containment began. Confirmation composite samples were collected from the bottom and sidewalls of the excavation to confirm that NMOCD closure criteria had been met, the results of which can be found in the following data table. Confirmation composite sample locations and excavation dimensions can be found on Confirmation Sample Map in [Appendix I](#). Complete laboratory reports are attached in [Appendix V](#).

Table 2: Confirmation Soil Sample Analysis

Sample ID	Sample Date	Depth (BGS)	BTEX mg/kg	Benzene mg/kg	GRO mg/kg	DRO mg/kg	MRO mg/kg	Total TPH mg/kg	Cl mg/kg
NMOCD Table 1 Closure Criteria 19.15.29 NMAC			50 mg/kg	10 mg/kg	100 mg/kg			100 mg/kg	600 mg/kg
S-1	5/12/2023	2'	ND	ND	ND	ND	ND	0	75.5
S-2	5/12/2023	2'	ND	ND	ND	ND	ND	0	70.5
SW-1	5/12/2023	2'	ND	ND	ND	ND	ND	0	65.9
SW-2	5/12/2023	2'	ND	ND	ND	ND	ND	0	75
SW-3	5/12/2023	2'	ND	ND	ND	ND	ND	0	70.4
SW-4	5/12/2023	2'	ND	ND	ND	ND	ND	0	66.4
ND = Analyte Not Detected S = Bottom Sample SW = Sidewall Sample									

Remedial Actions

- The impacted areas in the vicinity of sample point S-1 and S-2 were excavated to a total depth of 2-feet BGS.
- Composite confirmation samples were obtained from the sidewalls and bottom of the excavated area to verify that all contaminants above closure criteria had been removed.
- All the excavated material was hauled to and disposed of at Lea Land, a NMOCD approved solid waste disposal facility.
- The excavated area was backfilled with new topsoil at depth and brought to grade, machine compacted, re-ripped, and contoured to match the surrounding location.
- The Final C-141 formally documenting the remedial actions is attached in [Appendix III](#).

Closure

Based on the site assessment, remedial actions and confirmation sampling results completed for this project, on behalf of Cimarex Energy Co. of Colorado we request that no further actions be required, and that closure of this incident be granted.

Should you have any questions or if further information is required, please do not hesitate to contact our office at 575-909-0326.

Respectfully submitted,

H&R Enterprises, LLC



Michael Collier
Environmental Project Manager

Attachments:

- Appendix I Site Maps
- Appendix II Soil Survey, Groundwater Data, FEMA Flood Zone
- Appendix III Initial and Final C-141
- Appendix IV Photographic Documentation
- Appendix V Laboratory Reports

APPENDIX I

SITE MAPS

KARST MAP

TOPOGRAPHIC MAP

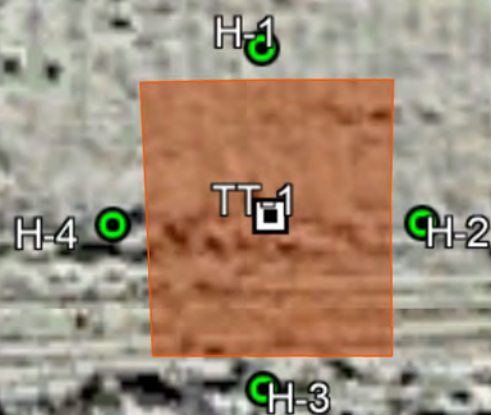
LOCATOR MAP

Wersell Federal #001

Cimarex Energy Co. of Colorado
Incident# nAB1515334420
Eddy County, NM
Site Assessment Map

Legend




- Horizontal Sample Point
- nAB1515334420 Historical Spill
- Vertical Test Trench Sample Point

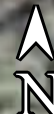
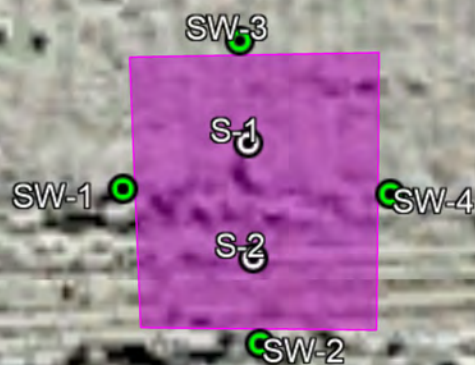


Wersell Federal #001

Cimarex Energy Co. of Colorado
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Eddy County, NM
Confirmation Sample Map

Legend

-  2ft. Excavation
-  Bottom Composite Sample
-  Sidewall Composite Sample

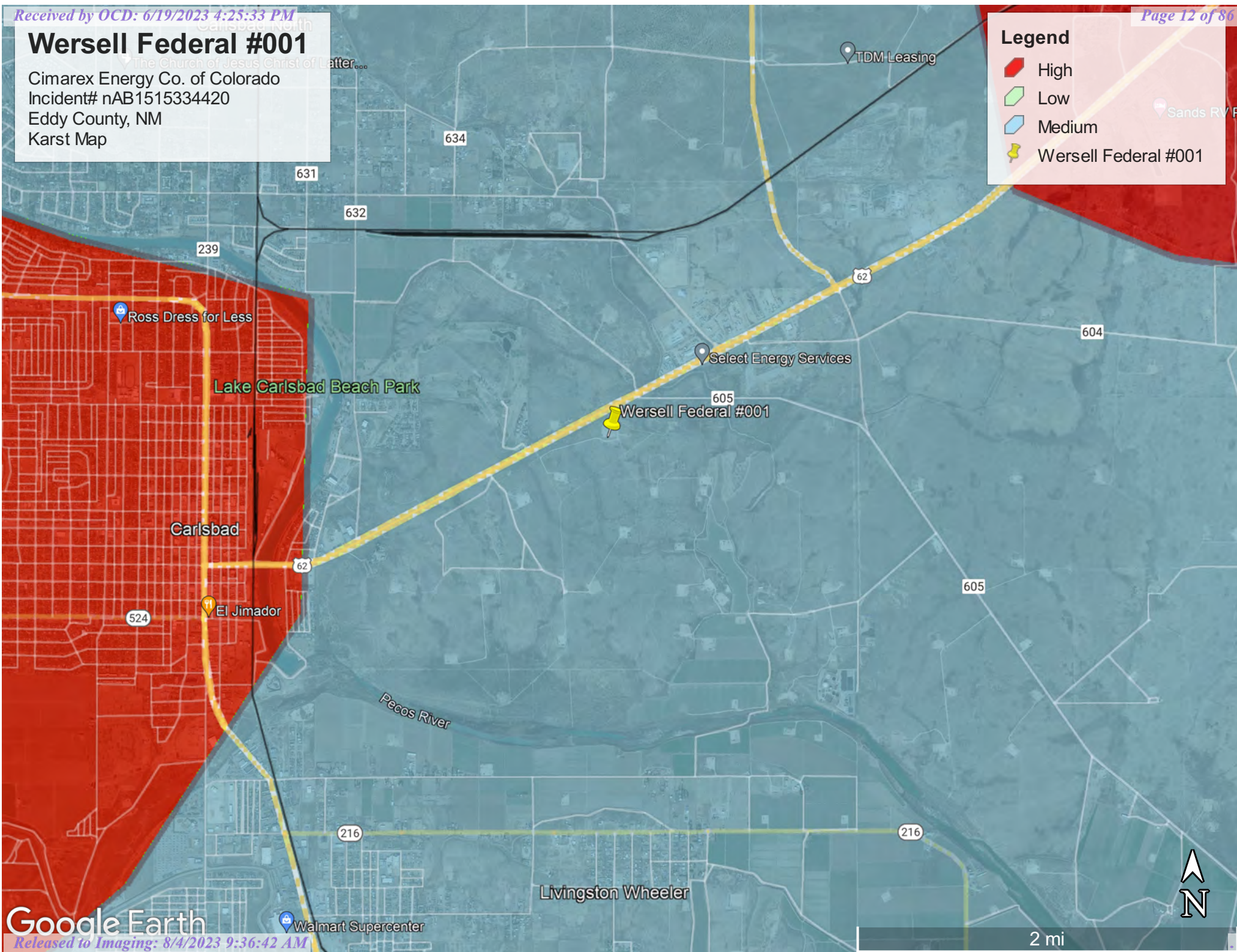


Wersell Federal #001

Cimarex Energy Co. of Colorado
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Eddy County, NM
Karst Map

Legend


- High
- Low
- Medium
- Wersell Federal #001

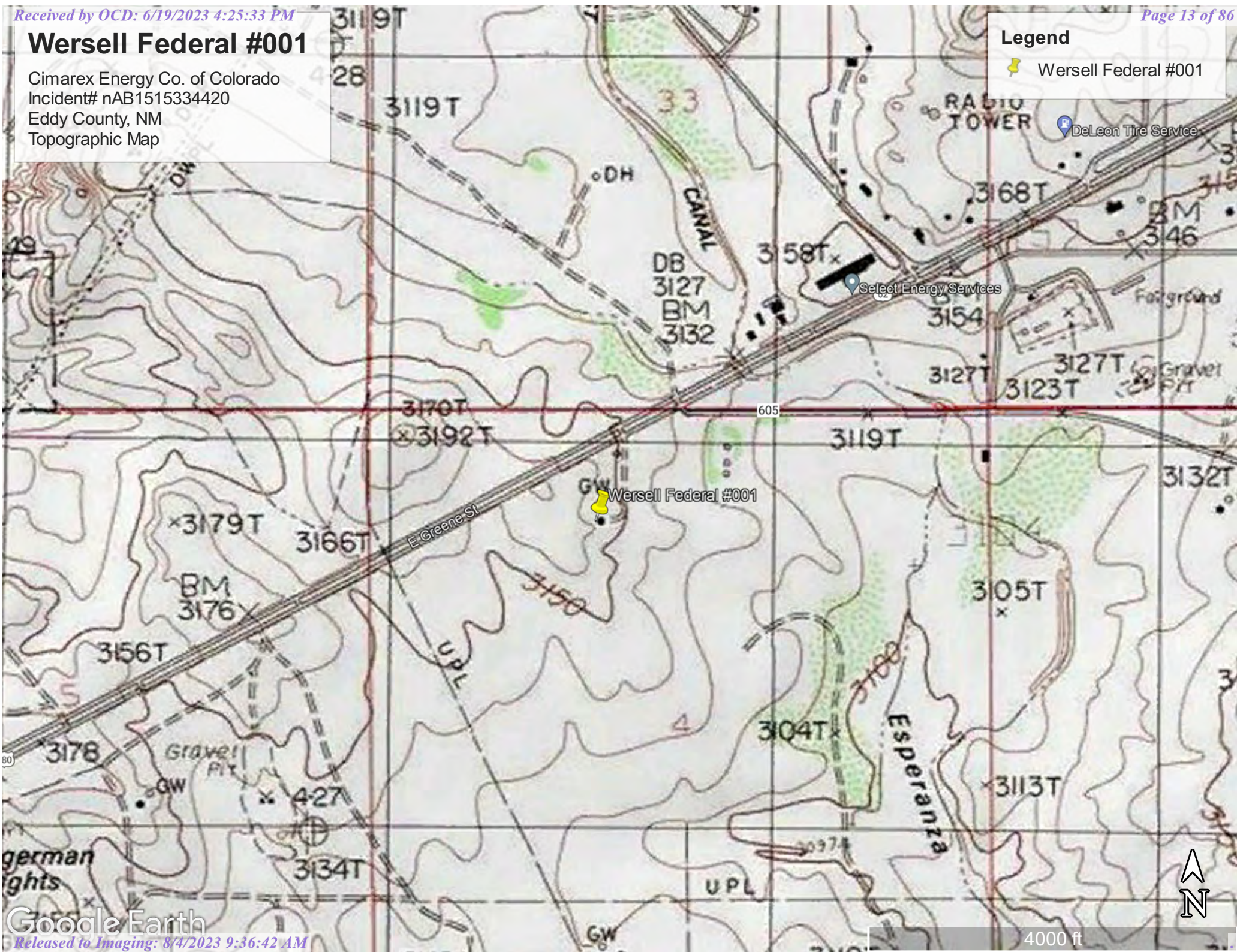


Wersell Federal #001

Cimarex Energy Co. of Colorado
Incident# nAB1515334420
Eddy County, NM
Topographic Map

Legend


 Wersell Federal #001

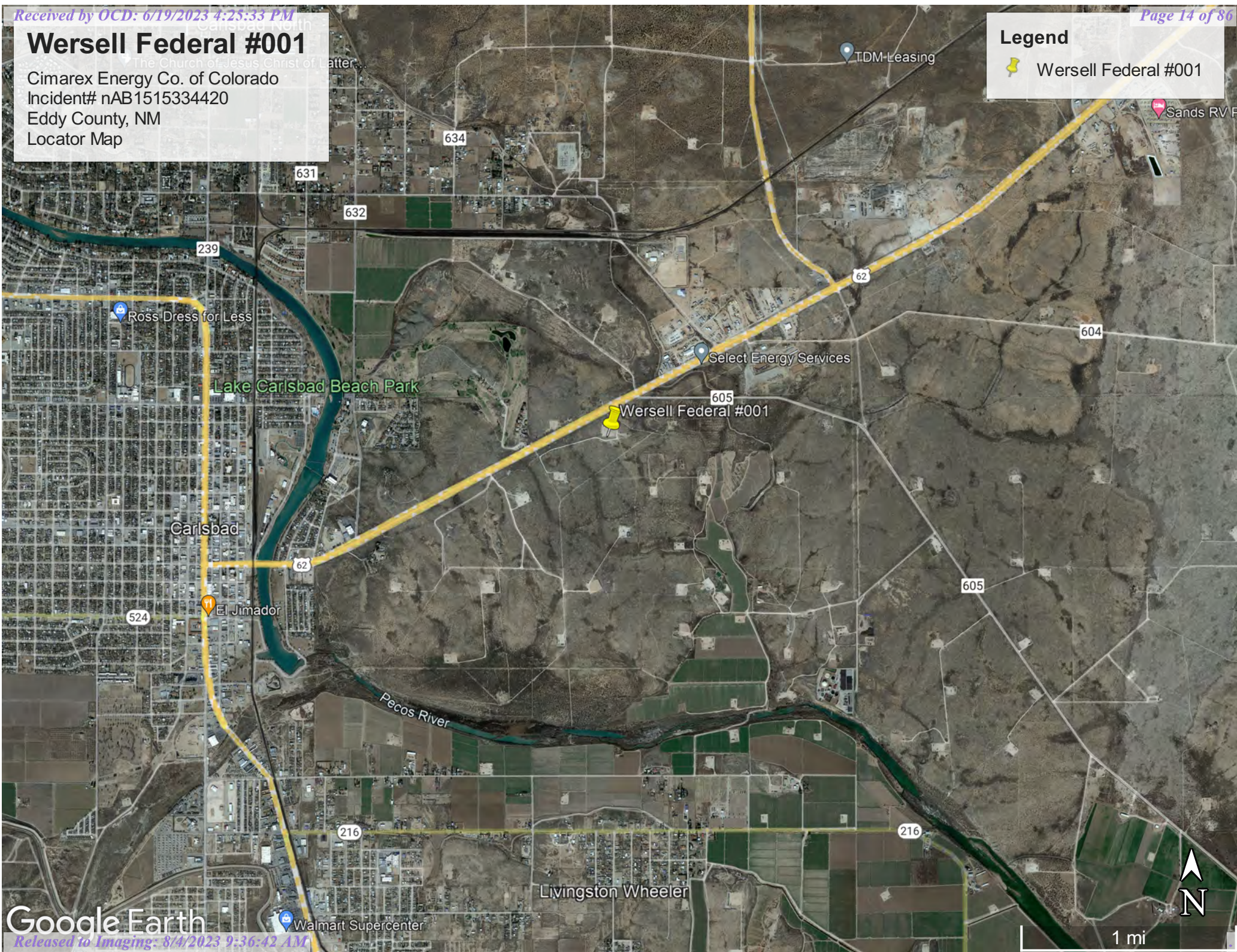


Wersell Federal #001

Cimarex Energy Co. of Colorado
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Eddy County, NM
Locator Map

Legend

 Wersell Federal #001



APPENDIX II

GROUNDWATER DATA

SOIL SURVEY

FEMA FLOOD ZONE



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)








































(quarters are 1=NW 2=NE 3=SW 4=SE)

















(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
C 02193		C	ED			4	32	21S	27E	574476	3588675*	1217	55	15	40
C 00589		CUB	ED	2	4	4	04	22S	27E	576412	3586974*	1378			
C 04457 POD4		CUB	ED	1	3	1	33	21S	27E	574936	3589466	1572	20	15	5
C 00479		C	ED			3	03	22S	27E	576919	3587082*	1699	200		
C 00197		C	ED				32	21S	27E	574067	3589068*	1778	300		
C 00751		C	ED				32	21S	27E	574067	3589068*	1778	325	15	310
C 00566		C	ED	2	2	2	32	21S	27E	574773	3589785*	1927	323	18	305
C 00632		CUB	ED	2	2	2	32	21S	27E	574773	3589785*	1927	270	30	240
C 00344		C	ED			3	3	32	21S	573464	3588465*	2074	180	17	163
C 02009		C	ED			3	3	32	21S	573464	3588465*	2074	50	32	18
C 00660		C	ED	2	1	2	32	21S	27E	574368	3589780*	2106	325	14	311
C 03335		C	ED	4	1	3	29	21S	27E	573636	3589020	2114	225	31	194
C 00188		C	ED			3	3	28	21S	575076	3590094*	2139	280		
C 00717		C	ED	3	3	1	05	22S	27E	573369	3587548*	2162	60	32	28
C 02170		C	ED	1	4	3	28	21S	27E	575375	3590196*	2205	253	60	193
C 00337		C	ED	1	1	2	32	21S	27E	574168	3589780*	2219	318	40	278
C 01650		C	ED			4	4	29	21S	574672	3590089*	2247	45		
C 00783		C	ED	3	1	3	05	22S	27E	573372	3587136*	2280	135	73	62
C 04457 POD2		CUB	ED	1	4	1	32	21S	27E	573743	3589466	2280	12	7	5
C 00652		CUB	ED	2	4	4	29	21S	27E	574771	3590188*	2307	458		
C 02645		C	ED	2	4	4	29	21S	27E	574771	3590188*	2307	195	45	150
C 02837		C	ED	2	4	4	29	21S	27E	574771	3590188*	2307	179	155	24
C 04312 POD4		CUB	ED	4	2	2	06	22S	27E	573133	3587937	2352	25	6	19
C 04457 POD1		CUB	ED	2	3	1	32	21S	27E	573618	3589444	2363	18	13	5
C 00561		C	ED	2	3	1	32	21S	27E	573561	3589368*	2364	250		
C 04443 POD1		C	ED	3	3	4	29	21S	27E	574180	3589974	2372	120	55	65
C 01947		C	ED			3	4	29	21S	574268	3590083*	2417	43	18	25
C 01250		C	ED			3	3	27	21S	576677	3590107*	2426	250	45	205
C 00673		C	ED	2	3	4	29	21S	27E	574367	3590182*	2457	309	30	279
C 04312 POD2		CUB	ED	3	2	2	06	22S	27E	572996	3587963	2488	25	6	19

C 04312 POD1		CUB	ED	3	2	2	06	22S	27E	572990	3587899		2495	25	21	4
C 00749		C	ED	4	4	3	29	21S	27E	573963	3589977*		2499			
C 00925		C	ED		1	3	28	21S	27E	575070	3590498*		2538	300	46	254
C 00222		CUB	ED	1	3	4	29	21S	27E	574167	3590182*		2554	297		
C 00767		CUB	ED	1	3	4	29	21S	27E	574167	3590182*		2554	150	26	124
C 02063		C	ED				08	22S	27E	574089	3585825*		2578	45	25	20
C 00106		CUB	ED	2	1	1	32	21S	27E	573560	3589769*		2618	105		
C 01038		C	ED	3	4	3	29	21S	27E	573763	3589977*		2626	293	14	279
C 01096		C	ED	3	4	3	29	21S	27E	573763	3589977*		2626	306	17	289
C 01101		C	ED	3	4	3	29	21S	27E	573763	3589977*		2626	315	17	298
C 00064 A		CUB	ED		1	1	32	21S	27E	573461	3589670*		2627	95	15	80
C 01252		C	ED		1	1	32	21S	27E	573461	3589670*		2627	260	17	243
C 01021		C	ED	3	2	4	31	21S	27E	572956	3588750*		2639	255	12	243
C 04378 POD1		CUB	ED	2	3	2	06	22S	27E	572845	3587841		2643			
C 04378 POD2		CUB	ED	2	3	2	06	22S	27E	572845	3587829		2644			
C 00943		C	ED	2	4	3	29	21S	27E	573963	3590177*		2661	280	27	253
C 00092 A	O	CUB	ED	1	3	4	09	22S	27E	575815	3585346*		2668	200		
C 02899		C	ED	1	3	4	09	22S	27E	575815	3585346*		2668	33	22	11
C 03038		C	ED	1	3	4	09	22S	27E	575815	3585346*		2668	43	15	28
C 01493		C	ED	2	3	3	09	22S	27E	575205	3585337*		2671	60	18	42
C 02206		C	ED	2	4	4	08	22S	27E	574800	3585333*		2747	60	18	42
C 01581		C	ED	1	1	1	32	21S	27E	573360	3589769*		2768			
C 02788		C	ED	1	1	1	32	21S	27E	573360	3589769*		2768	30	15	15
C 02374		C	ED		3	4	09	22S	27E	575916	3585247*		2780	54	15	39
C 02379		C	ED		3	4	09	22S	27E	575916	3585247*		2780	55	20	35
C 03029		C	ED		3	4	09	22S	27E	575916	3585247*		2780	45	18	27
C 03084		C	ED	3	1	4	08	22S	27E	574192	3585532*		2780	112	14	98
C 04145 POD1		C	ED	4	2	3	08	22S	27E	574048	3585604		2788	119	81	38
C 04684 POD1		C	ED	2	1	4	29	21S	27E	574315	3590541		2803	240		
C 00412		C	ED		4	4	08	22S	27E	574701	3585234*		2868	237	40	197
C 00092		CUB	ED	4	3	3	09	22S	27E	575205	3585137*		2870	70	40	30
C 00092 CLW193601	O	CUB	ED	4	3	3	09	22S	27E	575205	3585137*		2870	90	40	50
C 00092 CLW193956	O	CUB	ED	4	3	3	09	22S	27E	575205	3585137*		2870	90	40	50
C 00092 CLW193966	O	CUB	ED	4	3	3	09	22S	27E	575205	3585137*		2870	90	40	50
C 03171		C	ED	3	2	3	29	21S	27E	573705	3590267		2887	100	31	69
C 00023		CUB	ED	3	3	3	09	22S	27E	575005	3585137*		2896	90	35	55
C 00023 CLW193948	O	CUB	ED	3	3	3	09	22S	27E	575005	3585137*		2896	90	35	55
C 00023 S		CUB	ED	3	3	3	09	22S	27E	575005	3585137*		2896	90		
C 01126		C	ED	2	2	2	31	21S	27E	573155	3589750*		2917	260	30	230

C_03550.POD1		CUB	ED	2	3	4	06	22S	27E	572728	3586988		2934	25		
C_04423.POD1		CUB	ED	4	3	4	06	22S	27E	572859	3586676		2937	25	16	9
C_04428.POD1		CUB	ED	4	3	4	06	22S	27E	572859	3586676		2937	25	16	9
C_00089		C	ED		2	2	31	21S	27E	573056	3589651*		2940	280		
C_03651.POD12		CUB	ED	4	3	4	06	22S	27E	572855	3586667		2944	33		
C_00160		C	ED	2	3	3	10	22S	27E	576826	3585355*		2960	85	40	45
C_00160.CLW198701	O	C	ED	2	3	3	10	22S	27E	576826	3585355*		2960			
C_03651.POD5		CUB	ED	4	3	4	06	22S	27E	572815	3586694		2968	31	17	14
C_01755		C	ED		2	3	29	21S	27E	573860	3590480*		2970	320	17	303
C_02045		C	ED		2	3	29	21S	27E	573860	3590480*		2970	80	29	51
C_03651.POD9		CUB	ED	4	3	4	06	22S	27E	572860	3586602		2970	26		
C_03651.POD13		CUB	ED	4	3	4	06	22S	27E	572840	3586636		2972	30		
C_00021.A		CUB	ED	4	4	4	09	22S	27E	576421	3585150*		2993	196	40	156
C_00021.CLW193276	O	CUB	ED	4	4	4	09	22S	27E	576421	3585150*		2993	100		
C_03651.POD1		CUB	ED	4	3	4	06	22S	27E	572781	3586705		2994	30		
C_03651.POD4		CUB	ED	4	3	4	06	22S	27E	572772	3586719		2997	30		
C_03651.POD3		CUB	ED	4	3	4	06	22S	27E	572783	3586690		2999	30		

Average Depth to Water: **29 feet**Minimum Depth: **6 feet**Maximum Depth: **155 feet**

Record Count: 86

Basin/County Search:**County:** Eddy**UTMNAD83 Radius Search (in meters):****Easting (X):** 575484.62**Northing (Y):** 3587993.64**Radius:** 3000

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/19/23 1:30 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Map Unit Description: Upton gravelly loam, 0 to 9 percent slopes---Eddy Area, New Mexico

Eddy Area, New Mexico

Uo—Upton gravelly loam, 0 to 9 percent slopes

Map Unit Setting

National map unit symbol: 1w67

Elevation: 1,100 to 4,400 feet

Mean annual precipitation: 7 to 15 inches

Mean annual air temperature: 60 to 70 degrees F

Frost-free period: 200 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Upton and similar soils: 96 percent

Minor components: 4 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Upton

Setting

Landform: Ridges, fans

Landform position (three-dimensional): Side slope, rise

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Residuum weathered from limestone

Typical profile

H1 - 0 to 9 inches: gravelly loam

H2 - 9 to 13 inches: gravelly loam

H3 - 13 to 21 inches: cemented

H4 - 21 to 60 inches: very gravelly loam

Properties and qualities

Slope: 0 to 9 percent

Depth to restrictive feature: 7 to 20 inches to petrocalcic

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Low to moderately high (0.01 to 0.60 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 75 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Map Unit Description: Upton gravelly loam, 0 to 9 percent slopes---Eddy Area, New Mexico

Hydrologic Soil Group: D
Ecological site: R070BC025NM - Shallow
Hydric soil rating: No

Minor Components

Atoka

Percent of map unit: 1 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Atoka

Percent of map unit: 1 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Upton

Percent of map unit: 1 percent
Ecological site: R070BC025NM - Shallow
Hydric soil rating: No

Reagan

Percent of map unit: 1 percent
Ecological site: R070BC007NM - Loamy
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 18, Sep 8, 2022

National Flood Hazard Layer FIRMMette



104°12'8"W 32°25'51"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/19/2023 at 4:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX III

INITIAL C-141

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

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

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Cimaxex Energy	Contact Gloria Garza
Address 600 N Marienfeld Ste 600 Midland TX	Telephone No. 432-234-3204
Facility Name: Wersell Federal I	Facility Type: Tank Battery

Surface Owner: Federal	Mineral Owner	API No. 30-015-20915
------------------------	---------------	----------------------

LOCATION OF RELEASE

Unit Letter C	Section 04	Township 22S	Range 27E	Feet from the 810	North/South Line FNL	Feet from the 1980	East/West Line FWL	County Eddy
------------------	---------------	-----------------	--------------	----------------------	-------------------------	-----------------------	-----------------------	----------------

Latitude: 32.42693 Longitude: -104.19662

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 20 BBLs	Volume Recovered: 0 BBLs
Source of Release: Flow line	Date and Hour of Occurrence: 5/28/2015	Date and Hour of Discovery 5/28/2015
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jeff Robertson BLM & Mike Bratcher OCD	
By Whom? Gloria Garza	Date and Hour: 6/1/2015 4:20 PM CST	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

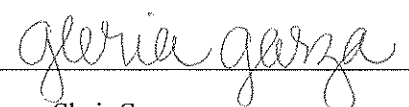
Describe Cause of Problem and Remedial Action Taken.*

Corrosion on a 45 pipe fitting attaching two flow lines. Moving forward we will fuse the two flow lines together to eliminate fitting washing out.

Describe Area Affected and Cleanup Action Taken.*

Talon Environmental Services will remediate the impacted soil.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Gloria Garza	Approved by Environmental Specialist:	
Title: ESH Tech	Approval Date:	Expiration Date:
E-mail Address: ggarza@cimaxex.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6/2/2015	Phone: 432-234-3204	

* Attach Additional Sheets If Necessary

Ashton Thielke

From: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Sent: Wednesday, May 10, 2023 9:38 AM
To: Ashton Thielke
Cc: Bratcher, Michael, EMNRD; Hamlet, Robert, EMNRD
Subject: RE: [EXTERNAL] nAB1507730700 & nAB1515334420 - WERSELL FEDERAL #001 - Confirmation Sampling Notification

WARNING: This email originated from outside of Coterra Energy. Do not click links or open attachments unless you recognize the sender, are expecting the content and know it is safe.

Ashton,

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

JH

Jocelyn Harimon • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
1220 South St. Francis Drive | Santa Fe, NM 87505
(505)469-2821 | Jocelyn.Harimon@emnrd.nm.gov
<http://www.emnrd.nm.gov>



From: Ashton Thielke <Ashton.Thielke@coterra.com>
Sent: Tuesday, May 9, 2023 2:52 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>; Enviro, OCD, EMNRD <OCD.Enviro@emnrd.nm.gov>
Cc: Laci Luig <Laci.Luig@coterra.com>
Subject: [EXTERNAL] nAB1507730700 & nAB1515334420 - WERSELL FEDERAL #001 - Confirmation Sampling Notification

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

Good afternoon,

This new email serves as 48+ hour notification for confirmation sampling on the Wersell Federal #001. Sampling is scheduled to begin as early as 10:00am (MST) Friday, May 12th, weather and soil conditions permitting. H&R Enterprises will be on site to collect the confirmation samples. Remediation for both incidents mentioned below will be completed at this time.

Incident ID: nAB1507730700 & nAB1515334420
Coordinates: 32.426505, -104.197119

Thank you,



Ashton Thielke | PBU - Environmental Consultant

T: 432.813.8988 | M: 281.753.5659 | ashton.thielke@coterra.com | www.coterra.com

Coterra Energy Inc. | 600 N. Marienfeld Street, Suite 600 | Midland, TX 79701

Coterra Energy Inc. is the result of the merger of Cimarex Energy Co. and Cabot Oil & Gas Corporation on October 1, 2021.

This message may contain confidential and/or privileged information. If you are not the addressee or authorized to receive this for the addressee, you must not use, copy, disclose or take any action based on this message or any information herein. If you have received this message in error, please advise the sender immediately by reply e-mail and delete this message.

Incident ID	
District RP	
Facility ID	
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?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> 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.

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	
Facility ID	
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: _____ Title: _____

Signature: *Dac. Lj* Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
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: _____ Title: _____

Signature:  Date: _____

email: _____ Telephone: _____

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:  Date: 8/4/2023

Printed Name: Brittany Hall Title: Environmental Specialist

APPENDIX IV

PHOTOGRAPHIC DOCUMENTATION

PHOTOGRAPHIC DOCUMENTATION

INITIAL PHOTOGRAPH



EXCAVATION PHOTOGRAPHS



PHOTOGRAPHIC DOCUMENTATION

EXCAVATION PHOTOGRAPHS



FINAL PHOTOGRAPH



APPENDIX V

LABORATORY REPORTS



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Michael Collier
H & R Enterprises
5120 W Kansas St
Hobbs, New Mexico 88242

Generated 4/28/2023 10:29:16 AM

JOB DESCRIPTION

Wersel Fed #001
SDG NUMBER (Wersell 1A)

JOB NUMBER

890-4552-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

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
4/28/2023 10:29:16 AM

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

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Laboratory Job ID: 890-4552-1
SDG: (Wersell 1A)

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Definitions/Glossary

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
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
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: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Job ID: 890-4552-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-4552-1****Receipt**

The samples were received on 4/20/2023 12:51 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 5.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: TT-1 0-1' (890-4552-1), TT-1 2'R (890-4552-2), H-1 0-1' (890-4552-3), H-2 0-1' (890-4552-4), H-3 0-1' (890-4552-5) and H-4 0-1' (890-4552-6).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: TT-1 0-1' (890-4552-1), H-1 0-1' (890-4552-3), H-2 0-1' (890-4552-4), H-3 0-1' (890-4552-5), H-4 0-1' (890-4552-6), (880-27483-A-1-C) and (880-27483-A-1-B MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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 880-51719 and analytical batch 880-51662 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (LCSD 880-51719/3-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: TT-1 0-1' (890-4552-1), TT-1 2'R (890-4552-2), H-1 0-1' (890-4552-3), H-2 0-1' (890-4552-4) and H-3 0-1' (890-4552-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

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

Client Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Client Sample ID: TT-1 0-1'

Lab Sample ID: 890-4552-1

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 03:07	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 03:07	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 03:07	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/21/23 13:29	04/22/23 03:07	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 03:07	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/21/23 13:29	04/22/23 03:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	04/21/23 13:29	04/22/23 03:07	1
1,4-Difluorobenzene (Surr)	66	S1-	70 - 130	04/21/23 13:29	04/22/23 03:07	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			04/24/23 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/24/23 12:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 02:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 02:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 02:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	211	S1+	70 - 130	04/21/23 13:59	04/22/23 02:01	1
o-Terphenyl	247	S1+	70 - 130	04/21/23 13:59	04/22/23 02:01	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1780		25.2		mg/Kg			04/27/23 18:55	5

Client Sample ID: TT-1 2'R

Lab Sample ID: 890-4552-2

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 2 - 2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:27	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:27	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/21/23 13:29	04/22/23 03:27	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:27	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/21/23 13:29	04/22/23 03:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130	04/21/23 13:29	04/22/23 03:27	1

Eurofins Carlsbad

Client Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Client Sample ID: TT-1 2'R

Lab Sample ID: 890-4552-2

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 2 - 2

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	104		70 - 130	04/21/23 13:29	04/22/23 03:27	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/24/23 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/24/23 12:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 02:23	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 02:23	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 02:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	204	S1+	70 - 130				04/21/23 13:59	04/22/23 02:23	1
o-Terphenyl	228	S1+	70 - 130				04/21/23 13:59	04/22/23 02:23	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	80.4		4.99		mg/Kg			04/27/23 19:00	1

Client Sample ID: H-1 0-1'

Lab Sample ID: 890-4552-3

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:48	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:48	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/21/23 13:29	04/22/23 03:48	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/21/23 13:29	04/22/23 03:48	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/21/23 13:29	04/22/23 03:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	68	S1-	70 - 130	04/21/23 13:29	04/22/23 03:48	1
1,4-Difluorobenzene (Surr)	73		70 - 130	04/21/23 13:29	04/22/23 03:48	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/24/23 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/24/23 12:42	1

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Client Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Client Sample ID: H-1 0-1'

Lab Sample ID: 890-4552-3

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/21/23 13:59	04/22/23 02:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/21/23 13:59	04/22/23 02:45	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/21/23 13:59	04/22/23 02:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	248	S1+	70 - 130				04/21/23 13:59	04/22/23 02:45	1
o-Terphenyl	273	S1+	70 - 130				04/21/23 13:59	04/22/23 02:45	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46.6		5.04		mg/Kg			04/27/23 19:05	1

Client Sample ID: H-2 0-1'

Lab Sample ID: 890-4552-4

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/22/23 04:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/22/23 04:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/22/23 04:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/21/23 13:29	04/22/23 04:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/22/23 04:08	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/21/23 13:29	04/22/23 04:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	56	S1-	70 - 130				04/21/23 13:29	04/22/23 04:08	1
1,4-Difluorobenzene (Surr)	82		70 - 130				04/21/23 13:29	04/22/23 04:08	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			04/24/23 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/24/23 12:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 03:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 03:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/22/23 03:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	203	S1+	70 - 130				04/21/23 13:59	04/22/23 03:07	1
o-Terphenyl	228	S1+	70 - 130				04/21/23 13:59	04/22/23 03:07	1

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Client Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Client Sample ID: H-2 0-1'

Lab Sample ID: 890-4552-4

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 0 - 1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48.4		5.03		mg/Kg			04/27/23 19:10	1

Client Sample ID: H-3 0-1'

Lab Sample ID: 890-4552-5

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/21/23 13:29	04/22/23 04:29	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/21/23 13:29	04/22/23 04:29	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/21/23 13:29	04/22/23 04:29	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		04/21/23 13:29	04/22/23 04:29	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/21/23 13:29	04/22/23 04:29	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		04/21/23 13:29	04/22/23 04:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	59	S1-	70 - 130				04/21/23 13:29	04/22/23 04:29	1
1,4-Difluorobenzene (Surr)	97		70 - 130				04/21/23 13:29	04/22/23 04:29	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			04/24/23 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			04/24/23 12:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		04/21/23 13:59	04/22/23 03:28	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/21/23 13:59	04/22/23 03:28	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/21/23 13:59	04/22/23 03:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	258	S1+	70 - 130				04/21/23 13:59	04/22/23 03:28	1
o-Terphenyl	282	S1+	70 - 130				04/21/23 13:59	04/22/23 03:28	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.7		4.97		mg/Kg			04/27/23 19:15	1

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Client Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Client Sample ID: H-4 0-1'

Lab Sample ID: 890-4552-6

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Sample Depth: 0 - 1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 04:49	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 04:49	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 04:49	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/21/23 13:29	04/22/23 04:49	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/21/23 13:29	04/22/23 04:49	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/21/23 13:29	04/22/23 04:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	59	S1-	70 - 130	04/21/23 13:29	04/22/23 04:49	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/21/23 13:29	04/22/23 04:49	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			04/24/23 15:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/24/23 12:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/21/23 13:59	04/22/23 03:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/21/23 13:59	04/22/23 03:50	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/21/23 13:59	04/22/23 03:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/21/23 13:59	04/22/23 03:50	1
o-Terphenyl	121		70 - 130	04/21/23 13:59	04/22/23 03:50	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34.5		4.97		mg/Kg			04/27/23 19:19	1

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Surrogate Summary

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-4552-1	TT-1 0-1'	113	66 S1-
890-4552-2	TT-1 2'R	62 S1-	104
890-4552-3	H-1 0-1'	68 S1-	73
890-4552-4	H-2 0-1'	56 S1-	82
890-4552-5	H-3 0-1'	59 S1-	97
890-4552-6	H-4 0-1'	59 S1-	100
LCS 880-51716/1-A	Lab Control Sample	119	111
LCSD 880-51716/2-A	Lab Control Sample Dup	108	100
MB 880-51617/5-A	Method Blank	99	98
MB 880-51716/5-A	Method Blank	76	79
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)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4552-1	TT-1 0-1'	211 S1+	247 S1+
890-4552-2	TT-1 2'R	204 S1+	228 S1+
890-4552-3	H-1 0-1'	248 S1+	273 S1+
890-4552-4	H-2 0-1'	203 S1+	228 S1+
890-4552-5	H-3 0-1'	258 S1+	282 S1+
890-4552-6	H-4 0-1'	107	121
LCS 880-51719/2-A	Lab Control Sample	110	127
LCSD 880-51719/3-A	Lab Control Sample Dup	114	131 S1+
MB 880-51719/1-A	Method Blank	137 S1+	169 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-51617/5-A

Matrix: Solid

Analysis Batch: 51663

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/20/23 13:10	04/21/23 11:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/20/23 13:10	04/21/23 11:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/20/23 13:10	04/21/23 11:01	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/20/23 13:10	04/21/23 11:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/20/23 13:10	04/21/23 11:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/20/23 13:10	04/21/23 11:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	04/20/23 13:10	04/21/23 11:01	1
1,4-Difluorobenzene (Surr)	98		70 - 130	04/20/23 13:10	04/21/23 11:01	1

Lab Sample ID: MB 880-51716/5-A

Matrix: Solid

Analysis Batch: 51663

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51716

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/21/23 21:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/21/23 21:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/21/23 21:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/21/23 13:29	04/21/23 21:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/21/23 13:29	04/21/23 21:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/21/23 13:29	04/21/23 21:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130	04/21/23 13:29	04/21/23 21:37	1
1,4-Difluorobenzene (Surr)	79		70 - 130	04/21/23 13:29	04/21/23 21:37	1

Lab Sample ID: LCS 880-51716/1-A

Matrix: Solid

Analysis Batch: 51663

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51716

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09926		mg/Kg		99	70 - 130
Toluene	0.100	0.09923		mg/Kg		99	70 - 130
Ethylbenzene	0.100	0.1014		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	0.200	0.2163		mg/Kg		108	70 - 130
o-Xylene	0.100	0.1095		mg/Kg		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	119		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Lab Sample ID: LCSD 880-51716/2-A

Matrix: Solid

Analysis Batch: 51663

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51716

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09527		mg/Kg		95	70 - 130	4	35

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

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

Lab Sample ID: LCSD 880-51716/2-A

Matrix: Solid

Analysis Batch: 51663

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51716

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.09162		mg/Kg		92	70 - 130	8	35
Ethylbenzene	0.100	0.08622		mg/Kg		86	70 - 130	16	35
m-Xylene & p-Xylene	0.200	0.1793		mg/Kg		90	70 - 130	19	35
o-Xylene	0.100	0.09045		mg/Kg		90	70 - 130	19	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

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

Lab Sample ID: MB 880-51719/1-A

Matrix: Solid

Analysis Batch: 51662

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 51719

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/21/23 19:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/21/23 19:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/23 13:59	04/21/23 19:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	137	S1+	70 - 130	04/21/23 13:59	04/21/23 19:51	1
o-Terphenyl	169	S1+	70 - 130	04/21/23 13:59	04/21/23 19:51	1

Lab Sample ID: LCS 880-51719/2-A

Matrix: Solid

Analysis Batch: 51662

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 51719

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	866.8		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	1000	909.4		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	127		70 - 130

Lab Sample ID: LCSD 880-51719/3-A

Matrix: Solid

Analysis Batch: 51662

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 51719

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1010		mg/Kg		101	70 - 130	15	20
Diesel Range Organics (Over C10-C28)	1000	941.5		mg/Kg		94	70 - 130	3	20

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

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

Lab Sample ID: LCSD 880-51719/3-A
Matrix: Solid
Analysis Batch: 51662

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 51719

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	131	S1+	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-51905/1-A
Matrix: Solid
Analysis Batch: 52117

Client Sample ID: Method Blank
Prep Type: Soluble

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/27/23 10:59	1

Lab Sample ID: LCS 880-51905/2-A
Matrix: Solid
Analysis Batch: 52117

Client Sample ID: Lab Control Sample
Prep Type: Soluble

	Spike	LCS	LCS					%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	250	270.6		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-51905/3-A
Matrix: Solid
Analysis Batch: 52117

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

	Spike	LCSD	LCSD					%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
Chloride	250	263.4		mg/Kg		105	90 - 110	3	20		

QC Association Summary

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

GC VOA

Prep Batch: 51617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-51617/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 51663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Total/NA	Solid	8021B	51716
890-4552-2	TT-1 2'R	Total/NA	Solid	8021B	51716
890-4552-3	H-1 0-1'	Total/NA	Solid	8021B	51716
890-4552-4	H-2 0-1'	Total/NA	Solid	8021B	51716
890-4552-5	H-3 0-1'	Total/NA	Solid	8021B	51716
890-4552-6	H-4 0-1'	Total/NA	Solid	8021B	51716
MB 880-51617/5-A	Method Blank	Total/NA	Solid	8021B	51617
MB 880-51716/5-A	Method Blank	Total/NA	Solid	8021B	51716
LCS 880-51716/1-A	Lab Control Sample	Total/NA	Solid	8021B	51716
LCSD 880-51716/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	51716

Prep Batch: 51716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Total/NA	Solid	5035	
890-4552-2	TT-1 2'R	Total/NA	Solid	5035	
890-4552-3	H-1 0-1'	Total/NA	Solid	5035	
890-4552-4	H-2 0-1'	Total/NA	Solid	5035	
890-4552-5	H-3 0-1'	Total/NA	Solid	5035	
890-4552-6	H-4 0-1'	Total/NA	Solid	5035	
MB 880-51716/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-51716/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-51716/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 51870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Total/NA	Solid	Total BTEX	
890-4552-2	TT-1 2'R	Total/NA	Solid	Total BTEX	
890-4552-3	H-1 0-1'	Total/NA	Solid	Total BTEX	
890-4552-4	H-2 0-1'	Total/NA	Solid	Total BTEX	
890-4552-5	H-3 0-1'	Total/NA	Solid	Total BTEX	
890-4552-6	H-4 0-1'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 51662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Total/NA	Solid	8015B NM	51719
890-4552-2	TT-1 2'R	Total/NA	Solid	8015B NM	51719
890-4552-3	H-1 0-1'	Total/NA	Solid	8015B NM	51719
890-4552-4	H-2 0-1'	Total/NA	Solid	8015B NM	51719
890-4552-5	H-3 0-1'	Total/NA	Solid	8015B NM	51719
890-4552-6	H-4 0-1'	Total/NA	Solid	8015B NM	51719
MB 880-51719/1-A	Method Blank	Total/NA	Solid	8015B NM	51719
LCS 880-51719/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	51719
LCSD 880-51719/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	51719

Eurofins Carlsbad

QC Association Summary

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

GC Semi VOA

Prep Batch: 51719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Total/NA	Solid	8015NM Prep	
890-4552-2	TT-1 2'R	Total/NA	Solid	8015NM Prep	
890-4552-3	H-1 0-1'	Total/NA	Solid	8015NM Prep	
890-4552-4	H-2 0-1'	Total/NA	Solid	8015NM Prep	
890-4552-5	H-3 0-1'	Total/NA	Solid	8015NM Prep	
890-4552-6	H-4 0-1'	Total/NA	Solid	8015NM Prep	
MB 880-51719/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-51719/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-51719/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

Analysis Batch: 51851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Total/NA	Solid	8015 NM	
890-4552-2	TT-1 2'R	Total/NA	Solid	8015 NM	
890-4552-3	H-1 0-1'	Total/NA	Solid	8015 NM	
890-4552-4	H-2 0-1'	Total/NA	Solid	8015 NM	
890-4552-5	H-3 0-1'	Total/NA	Solid	8015 NM	
890-4552-6	H-4 0-1'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 51905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Soluble	Solid	DI Leach	
890-4552-2	TT-1 2'R	Soluble	Solid	DI Leach	
890-4552-3	H-1 0-1'	Soluble	Solid	DI Leach	
890-4552-4	H-2 0-1'	Soluble	Solid	DI Leach	
890-4552-5	H-3 0-1'	Soluble	Solid	DI Leach	
890-4552-6	H-4 0-1'	Soluble	Solid	DI Leach	
MB 880-51905/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-51905/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-51905/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 52117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4552-1	TT-1 0-1'	Soluble	Solid	300.0	51905
890-4552-2	TT-1 2'R	Soluble	Solid	300.0	51905
890-4552-3	H-1 0-1'	Soluble	Solid	300.0	51905
890-4552-4	H-2 0-1'	Soluble	Solid	300.0	51905
890-4552-5	H-3 0-1'	Soluble	Solid	300.0	51905
890-4552-6	H-4 0-1'	Soluble	Solid	300.0	51905
MB 880-51905/1-A	Method Blank	Soluble	Solid	300.0	51905
LCS 880-51905/2-A	Lab Control Sample	Soluble	Solid	300.0	51905
LCSD 880-51905/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	51905

Eurofins Carlsbad

Lab Chronicle

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Client Sample ID: TT-1 0-1'

Lab Sample ID: 890-4552-1

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

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	51716	04/21/23 13:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51663	04/22/23 03:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51870	04/24/23 15:04	AJ	EET MID
Total/NA	Analysis	8015 NM		1			51851	04/24/23 12:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	51719	04/21/23 13:59	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51662	04/22/23 02:01	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	51905	04/25/23 07:42	KS	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	52117	04/27/23 18:55	SMC	EET MID

Client Sample ID: TT-1 2'R

Lab Sample ID: 890-4552-2

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	51716	04/21/23 13:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51663	04/22/23 03:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51870	04/24/23 15:04	AJ	EET MID
Total/NA	Analysis	8015 NM		1			51851	04/24/23 12:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	51719	04/21/23 13:59	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51662	04/22/23 02:23	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	51905	04/25/23 07:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52117	04/27/23 19:00	SMC	EET MID

Client Sample ID: H-1 0-1'

Lab Sample ID: 890-4552-3

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

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	51716	04/21/23 13:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51663	04/22/23 03:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51870	04/24/23 15:04	AJ	EET MID
Total/NA	Analysis	8015 NM		1			51851	04/24/23 12:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	51719	04/21/23 13:59	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51662	04/22/23 02:45	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	51905	04/25/23 07:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52117	04/27/23 19:05	SMC	EET MID

Client Sample ID: H-2 0-1'

Lab Sample ID: 890-4552-4

Date Collected: 04/20/23 00:00

Matrix: Solid

Date Received: 04/20/23 12:51

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	51716	04/21/23 13:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51663	04/22/23 04:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51870	04/24/23 15:04	AJ	EET MID

Eurofins Carlsbad

Lab Chronicle

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Client Sample ID: H-2 0-1'
Date Collected: 04/20/23 00:00
Date Received: 04/20/23 12:51

Lab Sample ID: 890-4552-4
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			51851	04/24/23 12:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	51719	04/21/23 13:59	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51662	04/22/23 03:07	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	51905	04/25/23 07:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52117	04/27/23 19:10	SMC	EET MID

Client Sample ID: H-3 0-1'
Date Collected: 04/20/23 00:00
Date Received: 04/20/23 12:51

Lab Sample ID: 890-4552-5
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	51716	04/21/23 13:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51663	04/22/23 04:29	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51870	04/24/23 15:04	AJ	EET MID
Total/NA	Analysis	8015 NM		1			51851	04/24/23 12:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	51719	04/21/23 13:59	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51662	04/22/23 03:28	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	51905	04/25/23 07:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52117	04/27/23 19:15	SMC	EET MID

Client Sample ID: H-4 0-1'
Date Collected: 04/20/23 00:00
Date Received: 04/20/23 12:51

Lab Sample ID: 890-4552-6
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	51716	04/21/23 13:29	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	51663	04/22/23 04:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			51870	04/24/23 15:04	AJ	EET MID
Total/NA	Analysis	8015 NM		1			51851	04/24/23 12:42	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	51719	04/21/23 13:59	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	51662	04/22/23 03:50	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	51905	04/25/23 07:42	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	52117	04/27/23 19:19	SMC	EET MID

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

Accreditation/Certification Summary

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

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	T104704400-22-25	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

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: H & R Enterprises
Project/Site: Wersel Fed #001

Job ID: 890-4552-1
SDG: (Wersell 1A)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4552-1	TT-1 0-1'	Solid	04/20/23 00:00	04/20/23 12:51	0 - 1
890-4552-2	TT-1 2'R	Solid	04/20/23 00:00	04/20/23 12:51	2 - 2
890-4552-3	H-1 0-1'	Solid	04/20/23 00:00	04/20/23 12:51	0 - 1
890-4552-4	H-2 0-1'	Solid	04/20/23 00:00	04/20/23 12:51	0 - 1
890-4552-5	H-3 0-1'	Solid	04/20/23 00:00	04/20/23 12:51	0 - 1
890-4552-6	H-4 0-1'	Solid	04/20/23 00:00	04/20/23 12:51	0 - 1

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



Environment Testing
Xenco

Work Order No: _____

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Work Order Comments

Program: ☐ UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐

State of Project: ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Reporting: ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: ☐ EDD ☐ ADaPT ☐ Other: _____

Project Manager: **M. COLLIER**

Company Name: **H&R ENTERPRISES**

Address: _____

City, State ZIP: _____

Phone: **575-909-0320**

Bill to: (if different) **CINAREX ENERGY**

Company Name: **ATTN: LACI LUK**

Address: _____

City, State ZIP: _____

Email: _____

ANALYSIS REQUEST		PRESERVATIVE CODES						
Project Name:	Turn Around	None: NO	DI Water: H ₂ O					
Project Number:	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Rush	Cool: Cool	MeOH: Me					
Project Location:	Due Date:	HCL: HC	HNO ₃ : HN					
Sampler's Name:	TAT starts the day received by the lab, if received by 4:30pm	H ₂ SO ₄ : H ₂	NaOH: Na					
P O #:	Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	H ₃ PO ₄ : HP						
SAMPLE RECEIPT		NaHSO ₄ : NABIS						
Samples Received Intact:	Thermometer ID: WMD07	Na ₂ S ₂ O ₃ : NaSO ₃						
Cooler Custody Seals:	Correction Factor: -0.2	Zn Acetate+NaOH: Zn						
Sample Custody Seals:	Temperature Reading: 5.2	NaOH+Ascorbic Acid: SAPC						
Total Containers:	Corrected Temperature: 5.0							
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Parameters	Pres. Code
TY-1 0-1'	SWL	4-10-23		0-1'	GRAB	1	CHLORIDES	
1 2-1'				2-1'			TPH	
H-1 0-1'				0-1'			BTEX	
H-2								
H-3								
H-4								

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 SiO₂ Na Sr Ti 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 Ti 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 \$3 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
<i>M. Collier</i>	<i>Oliver</i>	4-20-23 12:51			

Revised Date: 08/25/2020 Rev. 2020.1

Login Sample Receipt Checklist

Client: H & R Enterprises

Job Number: 890-4552-1

SDG Number: (Wersell 1A)

Login Number: 4552

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: H & R Enterprises

Job Number: 890-4552-1

SDG Number: (Wersell 1A)

Login Number: 4552

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 04/21/23 11:08 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	



Environment Testing

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ANALYTICAL REPORT

PREPARED FOR

Attn: Michael Collier
H & R Enterprises
5120 W Kansas St
Hobbs, New Mexico 88242

Generated 5/16/2023 4:18:40 PM

JOB DESCRIPTION

Wersell Fed #1 (wer)

JOB NUMBER

890-4657-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

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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5/16/2023 4:18:40 PM

Authorized for release by
Jessica Kramer, Project Manager
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Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Laboratory Job ID: 890-4657-1

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Definitions/Glossary

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
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, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
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

Eurofins Carlsbad

Case Narrative

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Job ID: 890-4657-1**Laboratory: Eurofins Carlsbad****Narrative****Job Narrative
890-4657-1****Receipt**

The samples were received on 5/12/2023 11:00 AM. 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 5.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: S-1 (890-4657-1), S-2 (890-4657-2), SW-1 (890-4657-3), SW-2 (890-4657-4), SW-3 (890-4657-5) and SW-4 (890-4657-6).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53334 recovered above the upper control limit for Ethylbenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-53384 and analytical batch 880-53334 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-53381 and analytical batch 880-53337 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53337 recovered above the upper control limit for Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: (CCV 880-53337/33) and (CCV 880-53337/44).

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-53381 and analytical batch 880-53337 was outside the control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-53335 recovered above the upper control limit for Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8021B: Surrogate recovery for the following samples were outside control limits: S-1 (890-4657-1), S-2 (890-4657-2), SW-1 (890-4657-3), (CCV 880-53335/20) and (880-28331-A-1-B MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: (CCV 880-53335/2) and (CCV 880-53335/20). 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.

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-53330/20), (CCV 880-53330/31) and (CCV 880-53330/5). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-53398 and analytical batch 880-53330 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: S-1 (890-4657-1) and SW-3 (890-4657-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Case Narrative

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Job ID: 890-4657-1 (Continued)

Laboratory: Eurofins Carlsbad (Continued)

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (CCV 880-53330/47). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: CCV biased low for Diesel Range Organics (Over C10-C28) however an acceptable CCV was ran within the 12 hour window therefore the data has been qualified and reported.(CCV 880-53330/31)

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

HPLC/IC

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

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Client Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Client Sample ID: S-1

Lab Sample ID: 890-4657-1

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		05/15/23 10:03	05/15/23 23:54	1
Toluene	<0.00201	U	0.00201		mg/Kg		05/15/23 10:03	05/15/23 23:54	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		05/15/23 10:03	05/15/23 23:54	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		05/15/23 10:03	05/15/23 23:54	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		05/15/23 10:03	05/15/23 23:54	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		05/15/23 10:03	05/15/23 23:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	136	S1+	70 - 130	05/15/23 10:03	05/15/23 23:54	1
1,4-Difluorobenzene (Surr)	83		70 - 130	05/15/23 10:03	05/15/23 23:54	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			05/16/23 16:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/16/23 11:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/15/23 14:27	05/15/23 21:07	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/15/23 14:27	05/15/23 21:07	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/15/23 14:27	05/15/23 21:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	05/15/23 14:27	05/15/23 21:07	1
o-Terphenyl	131	S1+	70 - 130	05/15/23 14:27	05/15/23 21:07	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75.5		4.95		mg/Kg			05/16/23 05:18	1

Client Sample ID: S-2

Lab Sample ID: 890-4657-2

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/15/23 10:03	05/16/23 00:20	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/15/23 10:03	05/16/23 00:20	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/15/23 10:03	05/16/23 00:20	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/15/23 10:03	05/16/23 00:20	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/15/23 10:03	05/16/23 00:20	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		05/15/23 10:03	05/16/23 00:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	135	S1+	70 - 130	05/15/23 10:03	05/16/23 00:20	1

Eurofins Carlsbad

Client Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Client Sample ID: S-2

Lab Sample ID: 890-4657-2

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	80		70 - 130	05/15/23 10:03	05/16/23 00:20	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			05/16/23 16:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/16/23 11:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/15/23 14:27	05/15/23 22:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/15/23 14:27	05/15/23 22:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/15/23 14:27	05/15/23 22:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				05/15/23 14:27	05/15/23 22:10	1
o-Terphenyl	127		70 - 130				05/15/23 14:27	05/15/23 22:10	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70.5		4.97		mg/Kg			05/16/23 05:34	1

Client Sample ID: SW-1

Lab Sample ID: 890-4657-3

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/15/23 10:03	05/16/23 00:46	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/15/23 10:03	05/16/23 00:46	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/15/23 10:03	05/16/23 00:46	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/15/23 10:03	05/16/23 00:46	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/15/23 10:03	05/16/23 00:46	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/15/23 10:03	05/16/23 00:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130	05/15/23 10:03	05/16/23 00:46	1
1,4-Difluorobenzene (Surr)	80		70 - 130	05/15/23 10:03	05/16/23 00:46	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/16/23 16:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/16/23 11:21	1

Eurofins Carlsbad

Client Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Client Sample ID: SW-1

Lab Sample ID: 890-4657-3

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 22:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 22:31	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 22:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				05/15/23 14:27	05/15/23 22:31	1
o-Terphenyl	124		70 - 130				05/15/23 14:27	05/15/23 22:31	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	65.9		5.02		mg/Kg			05/16/23 05:39	1

Client Sample ID: SW-2

Lab Sample ID: 890-4657-4

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U **	0.00200		mg/Kg		05/15/23 13:00	05/16/23 04:49	1
Toluene	<0.00200	U **	0.00200		mg/Kg		05/15/23 13:00	05/16/23 04:49	1
Ethylbenzene	<0.00200	U **	0.00200		mg/Kg		05/15/23 13:00	05/16/23 04:49	1
m-Xylene & p-Xylene	<0.00400	U **	0.00400		mg/Kg		05/15/23 13:00	05/16/23 04:49	1
o-Xylene	<0.00200	U **	0.00200		mg/Kg		05/15/23 13:00	05/16/23 04:49	1
Xylenes, Total	<0.00400	U **	0.00400		mg/Kg		05/15/23 13:00	05/16/23 04:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130				05/15/23 13:00	05/16/23 04:49	1
1,4-Difluorobenzene (Surr)	79		70 - 130				05/15/23 13:00	05/16/23 04:49	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			05/16/23 15:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/16/23 11:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 22:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 22:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 22:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				05/15/23 14:27	05/15/23 22:53	1
o-Terphenyl	122		70 - 130				05/15/23 14:27	05/15/23 22:53	1

Eurofins Carlsbad

Client Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Client Sample ID: SW-2

Lab Sample ID: 890-4657-4

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75.0		4.98		mg/Kg			05/16/23 05:45	1

Client Sample ID: SW-3

Lab Sample ID: 890-4657-5

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U **	0.00202		mg/Kg		05/15/23 13:18	05/16/23 02:59	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/15/23 13:18	05/16/23 02:59	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/15/23 13:18	05/16/23 02:59	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/15/23 13:18	05/16/23 02:59	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/15/23 13:18	05/16/23 02:59	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/15/23 13:18	05/16/23 02:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		70 - 130				05/15/23 13:18	05/16/23 02:59	1
1,4-Difluorobenzene (Surr)	93		70 - 130				05/15/23 13:18	05/16/23 02:59	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			05/16/23 16:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/16/23 11:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 23:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 23:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 23:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130				05/15/23 14:27	05/15/23 23:14	1
o-Terphenyl	131	S1+	70 - 130				05/15/23 14:27	05/15/23 23:14	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	70.4		5.04		mg/Kg			05/16/23 05:50	1

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Client Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Client Sample ID: SW-4

Lab Sample ID: 890-4657-6

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Sample Depth: 2'

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U **	0.00199		mg/Kg		05/15/23 13:18	05/16/23 03:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/15/23 13:18	05/16/23 03:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/15/23 13:18	05/16/23 03:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/15/23 13:18	05/16/23 03:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/15/23 13:18	05/16/23 03:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/15/23 13:18	05/16/23 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	05/15/23 13:18	05/16/23 03:19	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/15/23 13:18	05/16/23 03:19	1

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/16/23 16:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			05/16/23 11:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		05/15/23 14:27	05/15/23 23:35	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		05/15/23 14:27	05/15/23 23:35	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		05/15/23 14:27	05/15/23 23:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	104		70 - 130	05/15/23 14:27	05/15/23 23:35	1
o-Terphenyl	122		70 - 130	05/15/23 14:27	05/15/23 23:35	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66.4		4.98		mg/Kg			05/16/23 05:55	1

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Surrogate Summary

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
890-4657-1	S-1	136 S1+	83
890-4657-2	S-2	135 S1+	80
890-4657-3	SW-1	146 S1+	80
890-4657-4	SW-2	89	79
890-4657-5	SW-3	94	93
890-4657-5 MS	SW-3	104	103
890-4657-5 MSD	SW-3	108	99
890-4657-6	SW-4	103	97
LCS 880-53212/1-A	Lab Control Sample	108	93
LCS 880-53381/1-A	Lab Control Sample	114	111
LCS 880-53384/1-A	Lab Control Sample	98	110
LCSD 880-53212/2-A	Lab Control Sample Dup	109	83
LCSD 880-53381/2-A	Lab Control Sample Dup	112	110
LCSD 880-53384/2-A	Lab Control Sample Dup	94	124
MB 880-53212/5-A	Method Blank	81	79
MB 880-53272/5-A	Method Blank	93	103
MB 880-53337/39	Method Blank	68 S1-	89
MB 880-53381/5-A	Method Blank	65 S1-	72
MB 880-53384/5-A	Method Blank	93	103
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)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-4657-1	S-1	110	131 S1+
890-4657-1 MS	S-1	104	108
890-4657-1 MSD	S-1	102	106
890-4657-2	S-2	108	127
890-4657-3	SW-1	106	124
890-4657-4	SW-2	105	122
890-4657-5	SW-3	116	131 S1+
890-4657-6	SW-4	104	122
LCS 880-53398/2-A	Lab Control Sample	106	119
LCSD 880-53398/3-A	Lab Control Sample Dup	103	113
MB 880-53398/1-A	Method Blank	154 S1+	186 S1+
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-53212/5-A

Matrix: Solid

Analysis Batch: 53335

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53212

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/23 10:03	05/15/23 12:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/23 10:03	05/15/23 12:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/23 10:03	05/15/23 12:32	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/23 10:03	05/15/23 12:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/23 10:03	05/15/23 12:32	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/23 10:03	05/15/23 12:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		70 - 130	05/12/23 10:03	05/15/23 12:32	1
1,4-Difluorobenzene (Surr)	79		70 - 130	05/12/23 10:03	05/15/23 12:32	1

Lab Sample ID: LCS 880-53212/1-A

Matrix: Solid

Analysis Batch: 53335

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53212

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1128		mg/Kg		113	70 - 130
Toluene	0.100	0.1259		mg/Kg		126	70 - 130
Ethylbenzene	0.100	0.1136		mg/Kg		114	70 - 130
m-Xylene & p-Xylene	0.200	0.2573		mg/Kg		129	70 - 130
o-Xylene	0.100	0.1128		mg/Kg		113	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: LCSD 880-53212/2-A

Matrix: Solid

Analysis Batch: 53335

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 53212

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1103		mg/Kg		110	70 - 130	2	35
Toluene	0.100	0.1239		mg/Kg		124	70 - 130	2	35
Ethylbenzene	0.100	0.1118		mg/Kg		112	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.2518		mg/Kg		126	70 - 130	2	35
o-Xylene	0.100	0.1115		mg/Kg		111	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		70 - 130
1,4-Difluorobenzene (Surr)	83		70 - 130

Lab Sample ID: MB 880-53272/5-A

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53272

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/12/23 14:20	05/15/23 14:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/12/23 14:20	05/15/23 14:53	1

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

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

Lab Sample ID: MB 880-53272/5-A

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53272

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/12/23 14:20	05/15/23 14:53	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/12/23 14:20	05/15/23 14:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/12/23 14:20	05/15/23 14:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/12/23 14:20	05/15/23 14:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		70 - 130	05/12/23 14:20	05/15/23 14:53	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/12/23 14:20	05/15/23 14:53	1

Lab Sample ID: MB 880-53337/39

Matrix: Solid

Analysis Batch: 53337

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg			05/15/23 22:40	1
Toluene	<0.00200	U	0.00200		mg/Kg			05/15/23 22:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg			05/15/23 22:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg			05/15/23 22:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg			05/15/23 22:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg			05/15/23 22:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	68	S1-	70 - 130		05/15/23 22:40	1
1,4-Difluorobenzene (Surr)	89		70 - 130		05/15/23 22:40	1

Lab Sample ID: MB 880-53381/5-A

Matrix: Solid

Analysis Batch: 53337

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53381

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:00	05/16/23 02:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:00	05/16/23 02:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:00	05/16/23 02:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/15/23 13:00	05/16/23 02:25	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:00	05/16/23 02:25	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/15/23 13:00	05/16/23 02:25	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	65	S1-	70 - 130	05/15/23 13:00	05/16/23 02:25	1
1,4-Difluorobenzene (Surr)	72		70 - 130	05/15/23 13:00	05/16/23 02:25	1

Lab Sample ID: LCS 880-53381/1-A

Matrix: Solid

Analysis Batch: 53337

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1416	*+	mg/Kg		142	70 - 130
Toluene	0.100	0.1407	*+	mg/Kg		141	70 - 130

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

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

Lab Sample ID: LCS 880-53381/1-A

Matrix: Solid

Analysis Batch: 53337

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.100	0.1483	*+	mg/Kg		148	70 - 130
m-Xylene & p-Xylene	0.200	0.3013	*+	mg/Kg		151	70 - 130
o-Xylene	0.100	0.1493	*+	mg/Kg		149	70 - 130

Surrogate	LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	114		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Lab Sample ID: LCSD 880-53381/2-A

Matrix: Solid

Analysis Batch: 53337

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 53381

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
Benzene	0.100	0.1283		mg/Kg		128	70 - 130	10	35
Toluene	0.100	0.1205		mg/Kg		120	70 - 130	15	35
Ethylbenzene	0.100	0.1268		mg/Kg		127	70 - 130	16	35
m-Xylene & p-Xylene	0.200	0.2603		mg/Kg		130	70 - 130	15	35
o-Xylene	0.100	0.1296		mg/Kg		130	70 - 130	14	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: MB 880-53384/5-A

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53384

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:18	05/16/23 02:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:18	05/16/23 02:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:18	05/16/23 02:30	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/15/23 13:18	05/16/23 02:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/15/23 13:18	05/16/23 02:30	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/15/23 13:18	05/16/23 02:30	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	93		70 - 130	05/15/23 13:18	05/16/23 02:30	1
1,4-Difluorobenzene (Surr)	103		70 - 130	05/15/23 13:18	05/16/23 02:30	1

Lab Sample ID: LCS 880-53384/1-A

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1414	*+	mg/Kg		141	70 - 130
Toluene	0.100	0.1258		mg/Kg		126	70 - 130
Ethylbenzene	0.100	0.1281		mg/Kg		128	70 - 130
m-Xylene & p-Xylene	0.200	0.1982		mg/Kg		99	70 - 130

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

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

Lab Sample ID: LCS 880-53384/1-A

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53384

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	0.100	0.09338		mg/Kg		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: LCSD 880-53384/2-A

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 53384

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1266		mg/Kg		127	70 - 130	11	35
Toluene	0.100	0.1149		mg/Kg		115	70 - 130	9	35
Ethylbenzene	0.100	0.1209		mg/Kg		121	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.1872		mg/Kg		94	70 - 130	6	35
o-Xylene	0.100	0.08749		mg/Kg		87	70 - 130	7	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	124		70 - 130

Lab Sample ID: 890-4657-5 MS

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: SW-3

Prep Type: Total/NA

Prep Batch: 53384

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U *	0.0994	0.09999		mg/Kg		101	70 - 130
Toluene	<0.00202	U	0.0994	0.09463		mg/Kg		95	70 - 130
Ethylbenzene	<0.00202	U	0.0994	0.1001		mg/Kg		101	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1600		mg/Kg		80	70 - 130
o-Xylene	<0.00202	U	0.0994	0.07411		mg/Kg		75	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: 890-4657-5 MSD

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: SW-3

Prep Type: Total/NA

Prep Batch: 53384

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U *	0.0996	0.09692		mg/Kg		97	70 - 130	3	35
Toluene	<0.00202	U	0.0996	0.1067		mg/Kg		107	70 - 130	12	35
Ethylbenzene	<0.00202	U	0.0996	0.1176		mg/Kg		118	70 - 130	16	35
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1777		mg/Kg		89	70 - 130	11	35
o-Xylene	<0.00202	U	0.0996	0.08229		mg/Kg		83	70 - 130	10	35

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

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

Lab Sample ID: 890-4657-5 MSD

Matrix: Solid

Analysis Batch: 53334

Client Sample ID: SW-3

Prep Type: Total/NA

Prep Batch: 53384

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	99		70 - 130

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

Lab Sample ID: MB 880-53398/1-A

Matrix: Solid

Analysis Batch: 53330

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 53398

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 20:04	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 20:04	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/15/23 14:27	05/15/23 20:04	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil	Fac
1-Chlorooctane	154	S1+	70 - 130				05/15/23 14:27	05/15/23 20:04	1	
o-Terphenyl	186	S1+	70 - 130				05/15/23 14:27	05/15/23 20:04	1	

Lab Sample ID: LCS 880-53398/2-A

Matrix: Solid

Analysis Batch: 53330

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 53398

			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10			1000	909.0		mg/Kg		91	70 - 130	
Diesel Range Organics (Over C10-C28)			1000	935.5		mg/Kg		94	70 - 130	
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	106		70 - 130							
o-Terphenyl	119		70 - 130							

Lab Sample ID: LCSD 880-53398/3-A

Matrix: Solid

Analysis Batch: 53330

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 53398

			Spike	LCSD	LCSD				%Rec		RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10			1000	930.3		mg/Kg		93	70 - 130	2	20	
Diesel Range Organics (Over C10-C28)			1000	952.7		mg/Kg		95	70 - 130	2	20	
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	103		70 - 130									
o-Terphenyl	113		70 - 130									

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QC Sample Results

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

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

Lab Sample ID: 890-4657-1 MS

Matrix: Solid

Analysis Batch: 53330

Client Sample ID: S-1

Prep Type: Total/NA

Prep Batch: 53398

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	954.3		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	977.5		mg/Kg		96	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	104		70 - 130						
o-Terphenyl	108		70 - 130						

Lab Sample ID: 890-4657-1 MSD

Matrix: Solid

Analysis Batch: 53330

Client Sample ID: S-1

Prep Type: Total/NA

Prep Batch: 53398

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	<49.9	U	996	959.5		mg/Kg		94	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U	996	962.0		mg/Kg		94	70 - 130	2	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	102		70 - 130								
o-Terphenyl	106		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-53358/1-A

Matrix: Solid

Analysis Batch: 53409

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/16/23 03:26	1

Lab Sample ID: LCS 880-53358/2-A

Matrix: Solid

Analysis Batch: 53409

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	256.5		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 880-53358/3-A

Matrix: Solid

Analysis Batch: 53409

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	257.0		mg/Kg		103	90 - 110	0	20

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QC Association Summary

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

GC VOA

Prep Batch: 53212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Total/NA	Solid	5035	
890-4657-2	S-2	Total/NA	Solid	5035	
890-4657-3	SW-1	Total/NA	Solid	5035	
MB 880-53212/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53212/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53212/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 53272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-53272/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 53334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-5	SW-3	Total/NA	Solid	8021B	53384
890-4657-6	SW-4	Total/NA	Solid	8021B	53384
MB 880-53272/5-A	Method Blank	Total/NA	Solid	8021B	53272
MB 880-53384/5-A	Method Blank	Total/NA	Solid	8021B	53384
LCS 880-53384/1-A	Lab Control Sample	Total/NA	Solid	8021B	53384
LCSD 880-53384/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53384
890-4657-5 MS	SW-3	Total/NA	Solid	8021B	53384
890-4657-5 MSD	SW-3	Total/NA	Solid	8021B	53384

Analysis Batch: 53335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Total/NA	Solid	8021B	53212
890-4657-2	S-2	Total/NA	Solid	8021B	53212
890-4657-3	SW-1	Total/NA	Solid	8021B	53212
MB 880-53212/5-A	Method Blank	Total/NA	Solid	8021B	53212
LCS 880-53212/1-A	Lab Control Sample	Total/NA	Solid	8021B	53212
LCSD 880-53212/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53212

Analysis Batch: 53337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-4	SW-2	Total/NA	Solid	8021B	53381
MB 880-53337/39	Method Blank	Total/NA	Solid	8021B	
MB 880-53381/5-A	Method Blank	Total/NA	Solid	8021B	53381
LCS 880-53381/1-A	Lab Control Sample	Total/NA	Solid	8021B	53381
LCSD 880-53381/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	53381

Prep Batch: 53381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-4	SW-2	Total/NA	Solid	5035	
MB 880-53381/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-53381/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53381/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Prep Batch: 53384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-5	SW-3	Total/NA	Solid	5035	
890-4657-6	SW-4	Total/NA	Solid	5035	
MB 880-53384/5-A	Method Blank	Total/NA	Solid	5035	

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QC Association Summary

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

GC VOA (Continued)

Prep Batch: 53384 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-53384/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-53384/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4657-5 MS	SW-3	Total/NA	Solid	5035	
890-4657-5 MSD	SW-3	Total/NA	Solid	5035	

Analysis Batch: 53502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Total/NA	Solid	Total BTEX	
890-4657-2	S-2	Total/NA	Solid	Total BTEX	
890-4657-3	SW-1	Total/NA	Solid	Total BTEX	
890-4657-4	SW-2	Total/NA	Solid	Total BTEX	
890-4657-5	SW-3	Total/NA	Solid	Total BTEX	
890-4657-6	SW-4	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 53330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Total/NA	Solid	8015B NM	53398
890-4657-2	S-2	Total/NA	Solid	8015B NM	53398
890-4657-3	SW-1	Total/NA	Solid	8015B NM	53398
890-4657-4	SW-2	Total/NA	Solid	8015B NM	53398
890-4657-5	SW-3	Total/NA	Solid	8015B NM	53398
890-4657-6	SW-4	Total/NA	Solid	8015B NM	53398
MB 880-53398/1-A	Method Blank	Total/NA	Solid	8015B NM	53398
LCS 880-53398/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	53398
LCSD 880-53398/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	53398
890-4657-1 MS	S-1	Total/NA	Solid	8015B NM	53398
890-4657-1 MSD	S-1	Total/NA	Solid	8015B NM	53398

Prep Batch: 53398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Total/NA	Solid	8015NM Prep	
890-4657-2	S-2	Total/NA	Solid	8015NM Prep	
890-4657-3	SW-1	Total/NA	Solid	8015NM Prep	
890-4657-4	SW-2	Total/NA	Solid	8015NM Prep	
890-4657-5	SW-3	Total/NA	Solid	8015NM Prep	
890-4657-6	SW-4	Total/NA	Solid	8015NM Prep	
MB 880-53398/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-53398/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-53398/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-4657-1 MS	S-1	Total/NA	Solid	8015NM Prep	
890-4657-1 MSD	S-1	Total/NA	Solid	8015NM Prep	

Analysis Batch: 53464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Total/NA	Solid	8015 NM	
890-4657-2	S-2	Total/NA	Solid	8015 NM	
890-4657-3	SW-1	Total/NA	Solid	8015 NM	
890-4657-4	SW-2	Total/NA	Solid	8015 NM	
890-4657-5	SW-3	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

GC Semi VOA (Continued)

Analysis Batch: 53464 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-6	SW-4	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 53358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Soluble	Solid	DI Leach	
890-4657-2	S-2	Soluble	Solid	DI Leach	
890-4657-3	SW-1	Soluble	Solid	DI Leach	
890-4657-4	SW-2	Soluble	Solid	DI Leach	
890-4657-5	SW-3	Soluble	Solid	DI Leach	
890-4657-6	SW-4	Soluble	Solid	DI Leach	
MB 880-53358/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-53358/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-53358/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 53409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4657-1	S-1	Soluble	Solid	300.0	53358
890-4657-2	S-2	Soluble	Solid	300.0	53358
890-4657-3	SW-1	Soluble	Solid	300.0	53358
890-4657-4	SW-2	Soluble	Solid	300.0	53358
890-4657-5	SW-3	Soluble	Solid	300.0	53358
890-4657-6	SW-4	Soluble	Solid	300.0	53358
MB 880-53358/1-A	Method Blank	Soluble	Solid	300.0	53358
LCS 880-53358/2-A	Lab Control Sample	Soluble	Solid	300.0	53358
LCSD 880-53358/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	53358

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Lab Chronicle

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Client Sample ID: S-1

Lab Sample ID: 890-4657-1

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	53212	05/15/23 10:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53335	05/15/23 23:54	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53502	05/16/23 16:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			53464	05/16/23 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	53398	05/15/23 14:27	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53330	05/15/23 21:07	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	53358	05/15/23 11:39	KS	EET MID
Soluble	Analysis	300.0		1			53409	05/16/23 05:18	SMC	EET MID

Client Sample ID: S-2

Lab Sample ID: 890-4657-2

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	53212	05/15/23 10:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53335	05/16/23 00:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53502	05/16/23 16:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			53464	05/16/23 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	53398	05/15/23 14:27	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53330	05/15/23 22:10	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	53358	05/15/23 11:39	KS	EET MID
Soluble	Analysis	300.0		1			53409	05/16/23 05:34	SMC	EET MID

Client Sample ID: SW-1

Lab Sample ID: 890-4657-3

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53212	05/15/23 10:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53335	05/16/23 00:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53502	05/16/23 16:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			53464	05/16/23 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53398	05/15/23 14:27	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53330	05/15/23 22:31	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	53358	05/15/23 11:39	KS	EET MID
Soluble	Analysis	300.0		1			53409	05/16/23 05:39	SMC	EET MID

Client Sample ID: SW-2

Lab Sample ID: 890-4657-4

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	53381	05/15/23 13:00	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53337	05/16/23 04:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53502	05/16/23 15:46	SM	EET MID

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Lab Chronicle

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Client Sample ID: SW-2

Lab Sample ID: 890-4657-4

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

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			53464	05/16/23 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	53398	05/15/23 14:27	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53330	05/15/23 22:53	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53358	05/15/23 11:39	KS	EET MID
Soluble	Analysis	300.0		1			53409	05/16/23 05:45	SMC	EET MID

Client Sample ID: SW-3

Lab Sample ID: 890-4657-5

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

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	53384	05/15/23 13:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53334	05/16/23 02:59	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53502	05/16/23 16:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			53464	05/16/23 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	53398	05/15/23 14:27	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53330	05/15/23 23:14	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	53358	05/15/23 11:39	KS	EET MID
Soluble	Analysis	300.0		1			53409	05/16/23 05:50	SMC	EET MID

Client Sample ID: SW-4

Lab Sample ID: 890-4657-6

Date Collected: 05/12/23 00:00

Matrix: Solid

Date Received: 05/12/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	53384	05/15/23 13:18	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	53334	05/16/23 03:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			53502	05/16/23 16:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			53464	05/16/23 11:21	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	53398	05/15/23 14:27	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	53330	05/15/23 23:35	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	53358	05/15/23 11:39	KS	EET MID
Soluble	Analysis	300.0		1			53409	05/16/23 05:55	SMC	EET MID

Laboratory References:

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

Eurofins Carlsbad

Accreditation/Certification Summary

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

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	T104704400-22-25	06-30-23

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

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: H & R Enterprises
Project/Site: Wersell Fed #1 (wer)

Job ID: 890-4657-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4657-1	S-1	Solid	05/12/23 00:00	05/12/23 11:00	2'
890-4657-2	S-2	Solid	05/12/23 00:00	05/12/23 11:00	2'
890-4657-3	SW-1	Solid	05/12/23 00:00	05/12/23 11:00	2'
890-4657-4	SW-2	Solid	05/12/23 00:00	05/12/23 11:00	2'
890-4657-5	SW-3	Solid	05/12/23 00:00	05/12/23 11:00	2'
890-4657-6	SW-4	Solid	05/12/23 00:00	05/12/23 11:00	2'



Environment Testing
Xenco

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

Chain of Custody

Work Order No: _____

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Page 1 of 1

Project Manager:	M Collier	Bill to: (if different)	Cinmarex Energy
Company Name:	HAR Enterprises	Company Name:	Attn: Laci Luig
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	

Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: _____

Project Name:	Mersell Field #1 (WED)	Turn Around	<input type="checkbox"/> Routine <input checked="" type="checkbox"/> Rush	Pri. Code	
Project Number:		Due Date:	3-Day		
Project Location:		TAT starts the day received by the lab, if received by 4:30pm			
Sampler's Name:	R. Bell				
PO #:					
SAMPLE RECEIPT					
Samples Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Cooler Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Thermometer ID:	THM-007		
Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Correction Factor:	-0.2		
Total Containers:		Temperature Reading:	5.3		
		Corrected Temperature:	5.0		
Parameters					
BTEX					
TPH					
Chlorides					
ANALYSIS REQUEST					
Preservative Codes					
None: NO DI Water: H ₂ O					
Cool: Cool MeOH: Me					
HCL: HC HNO ₃ : HN					
H ₂ SO ₄ : H ₂ NaOH: Na					
H ₃ PO ₄ : HP					
NaHSO ₄ : NABIS					
Na ₂ S ₂ O ₃ : NaSO ₃					
Zn Acetate+NaOH: Zn					
NaOH+Ascorbic Acid: SAPC					



890-4857 Chain of Custody

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/Comp	# of Cont	Sample Comments
S-1		5/15/23		2'	C	1	
S-2							
SU-1							
SU-2							
SU-3							
SU-4							

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 SIO₂ Na Sr Ti 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 Ti 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
<i>[Signature]</i>	<i>[Signature]</i>	5/12/23 11:00			

Login Sample Receipt Checklist

Client: H & R Enterprises

Job Number: 890-4657-1

Login Number: 4657

List Source: Eurofins Carlsbad

List Number: 1

Creator: Stutzman, Amanda

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: H & R Enterprises

Job Number: 890-4657-1

Login Number: 4657

List Number: 2

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

List Creation: 05/15/23 08:35 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	

District I
1625 N. French Dr., Hobbs, NM 88240
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District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 230364

CONDITIONS

Operator: CIMAREX ENERGY CO. OF COLORADO 6001 Deauville Blvd, Ste 300N Midland, TX 79706	OGRID: 162683
	Action Number: 230364
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	8/4/2023