ENSOLUM

June 25, 2022

District 1
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, New Mexico 88240

Re: Remediation Work Plan
Broadcaster 29 Federal 003H
Incident Numbers NAPP2132773092 and NAPP2201938653
Lea County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of COG Operating, LLC (COG), has prepared this Remediation Work Plan to document site assessment, excavation, and soil sampling activities completed to date from two separate release events, each resulting from crude oil flare fires at the Site. The following Work Plan proposes installation of a depth to water boring to confirm the Closure Criteria at the Site.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit B, Section 29, Township 23 South, Range 34 East, in Lea County, New Mexico (32.282° N, 103.494° W) and is associated with oil and gas exploration and production operations on private land.

NAPP2132773092

On October 26, 2021, the heater failed to dump, causing approximately 0.5 barrels (bbls) of crude oil to release out of the flare. The released crude oil ignited and extinguished itself after reaching the ground. COG reported the release immediately via email to the New Mexico Oil Conservation Division (NMOCD) on October 28, 2021 and submitted a Release Notification Form C-141 (Form C-141) on November 23, 2021. The release was assigned Incident Number NAPP2132773092.

NAPP2201938653

On January 4, 2022, the heater failed to dump, causing approximately 0.2 bbls of crude oil to release out of the flare. The released crude oil ignited and extinguished itself after reaching the ground. COG reported the release immediately via email to the NMOCD on January 5, 2022 and submitted a Form C-141 on January 19, 2022. The release was assigned Incident Number NAPP2201938653.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC).

Results from the characterization desktop review are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321734103290001, located approximately 1.14 miles northeast of the Site. The groundwater well has a reported depth to groundwater of 345 feet bgs and a total depth of 400 feet bgs. Ground surface elevation at the groundwater well location is 3,061 feet above mean sea level (amsl), which is approximately 13 feet lower in elevation than the Site. All wells used for depth to groundwater determination are presented on Figure 1. Regionally, depth to groundwater appears to range from 130 feet bgs to 475 feet bgs, indicating groundwater beneath the Site is resonalby estimated to be greater than 100 feet bgs.The referenced well records are included in Attachment 1.

The closest continuously flowing or significant watercourse to the Site is a palustrine, located approximately 511 feet south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On January 7 and March 29, 2022, Site assessment activities were conducted to evaluate the two release events based on information provided on the Form C-141's and visual observations. Seven preliminary assessment soil samples (SS01 through SS07) were collected around the flare stack at a depth of 0.5 feet bgs, to assess the lateral extent of the releases. The preliminary soil samples were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The visible release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH- GRO, TPH- DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for preliminary soil sample SS02 indicated TPH-GRO/TPH-DRO and TPH concentrations exceeded the Closure Criteria. Laboratory analytical results for preliminary soil samples SS01 and SS03 through SS07 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, soil samples SS05 through SS07, collected around the flare stack were compliant with the most stringent Table 1 Closure Criteria, and successfully defined the lateral extent of the release and confirmed no fluids migrated off pad. Based on laboratory analytical results for the preliminary soil sample SS02, excavation activities appeared to be warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

On March 29, 2022, Ensolum personnel were at the Site to oversee site assessment and excavation activities based on preliminary soil sample SS02.

Excavation activities were performed via backhoe and transport vehicle. To direct excavation activities, soil was field screened for VOCs and chloride. The excavation was completed to a depth of 0.75 feet bgs. Photographic documentation is included in Appendix B.

Following removal of impacted soil, a 5-point composite soil sample was collected based on a frequency of every 200 square feet from the floor of the excavation. The 5-point composite sample was collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil sample FS01 was collected from the floor of the excavation at a depth of 0.75 feet bgs. Due to the shallow depth of the excavation, soil from the sidewalls was incorporated into the floor sample. The excavation and lateral delineation soil samples were handled and analyzed following the same procedures as described above. The excavation extent and excavation confirmation soil sample location are presented on Figure 3.

The excavation measured approximately 195 square feet in areal extent. A total of approximately 5 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico.

Laboratory analytical results for excavation confirmation floor sample FS01 indicated benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Appendix C.

PROPOSED REMEDIATION WORK PLAN

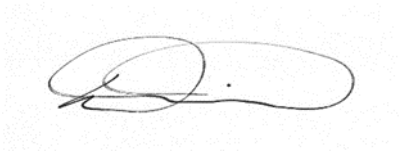
COG proposes installation of a depth to water boring within 0.5 miles of the release to confirm the applied Closure Criteria at the Site.

In order to confirm depth to groundwater is greater than 100 feet bgs at the Site and confirm the applied Closure Criteria, Ensolum and COG propose to complete a depth to water boring within 0.5 miles of the release. The soil boring will be advanced until groundwater is encountered or to a maximum depth of approximately 110 feet bgs. An Ensolum geologist will log and describe soils continuously and will document observations on a lithologic/ soil sampling log. The borehole will be left open for a minimum of 72 hours to allow for the potential slow infill of groundwater. Following the 72-hour waiting period, depth to groundwater will be measured or the Ensolum geologist will confirm groundwater is absent in the boring. The borehole will be properly abandoned following New Mexico Office of the State Engineer (NMOSE) procedures. Ensolum and COG will include documentation of the soil boring installation and lithologic/ soil sampling log in the subsequent closure request if groundwater is confirmed to be greater than 100 feet bgs.

The depth to water boring will be completed as soon as possible following approval from the surface landowner and scheduling with a New Mexico licensed driller. Ensolum will present the drilling schedule within 60 days of approved Work Plan. The Final C-141 is attached in Appendix E.

If you have any questions or comments, please contact Ms. Kalei Jennings at (817) 683-2503 or kjennings@ensolum.com.

Sincerely,
Ensolum, LLC



Kalei Jennings
Senior Scientist

Daniel R. Moir, P.G.
Senior Managing Geologist

cc: Charles Beauvais, COG Operating, LLC

Appendices:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Photographic Log
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation
Appendix D	NMOCD Sample Notification
Appendix E	Final C-141

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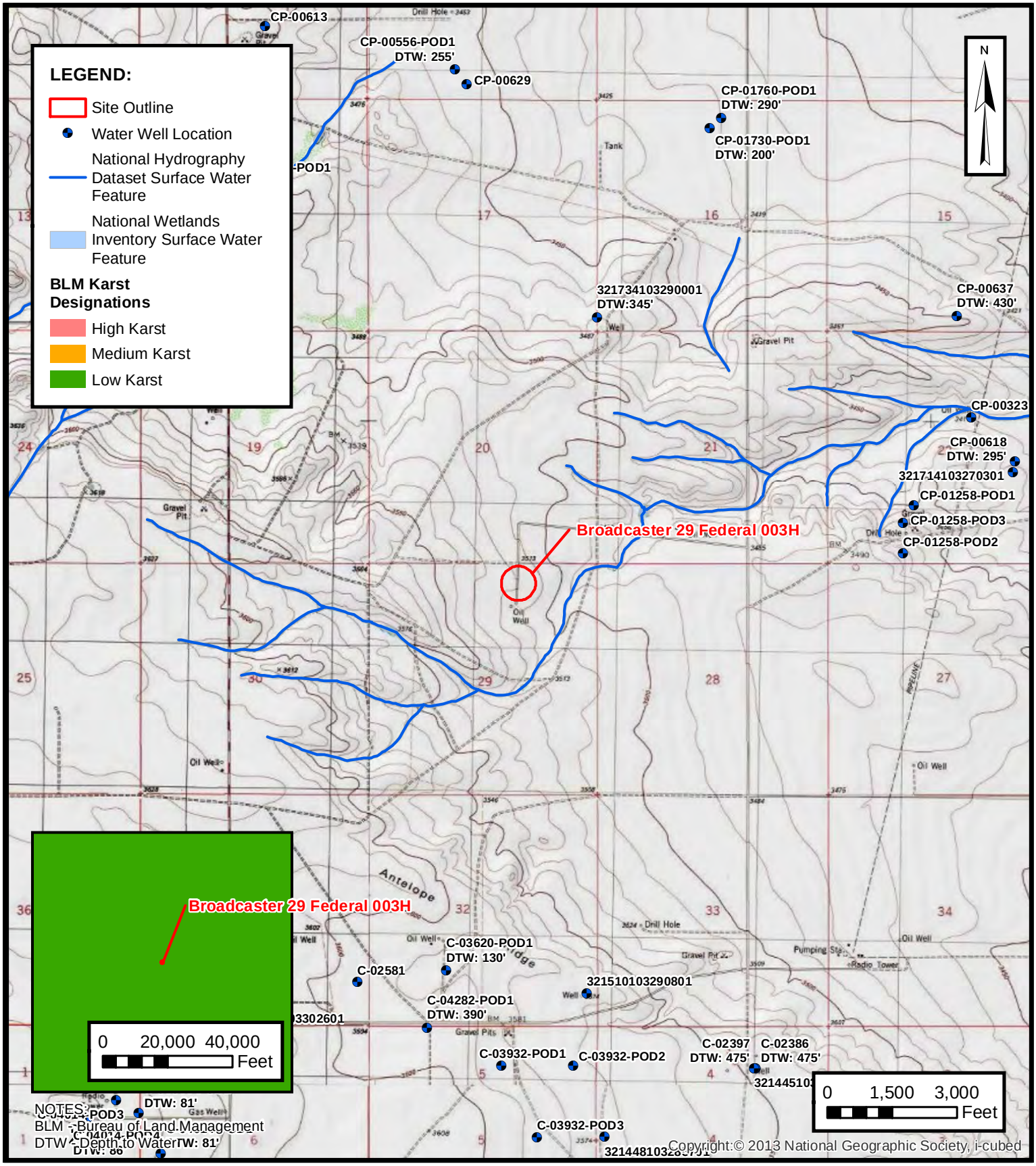
FIGURES



NOTES:
BLM - Bureau of Land Management
DTW - Depth to Water

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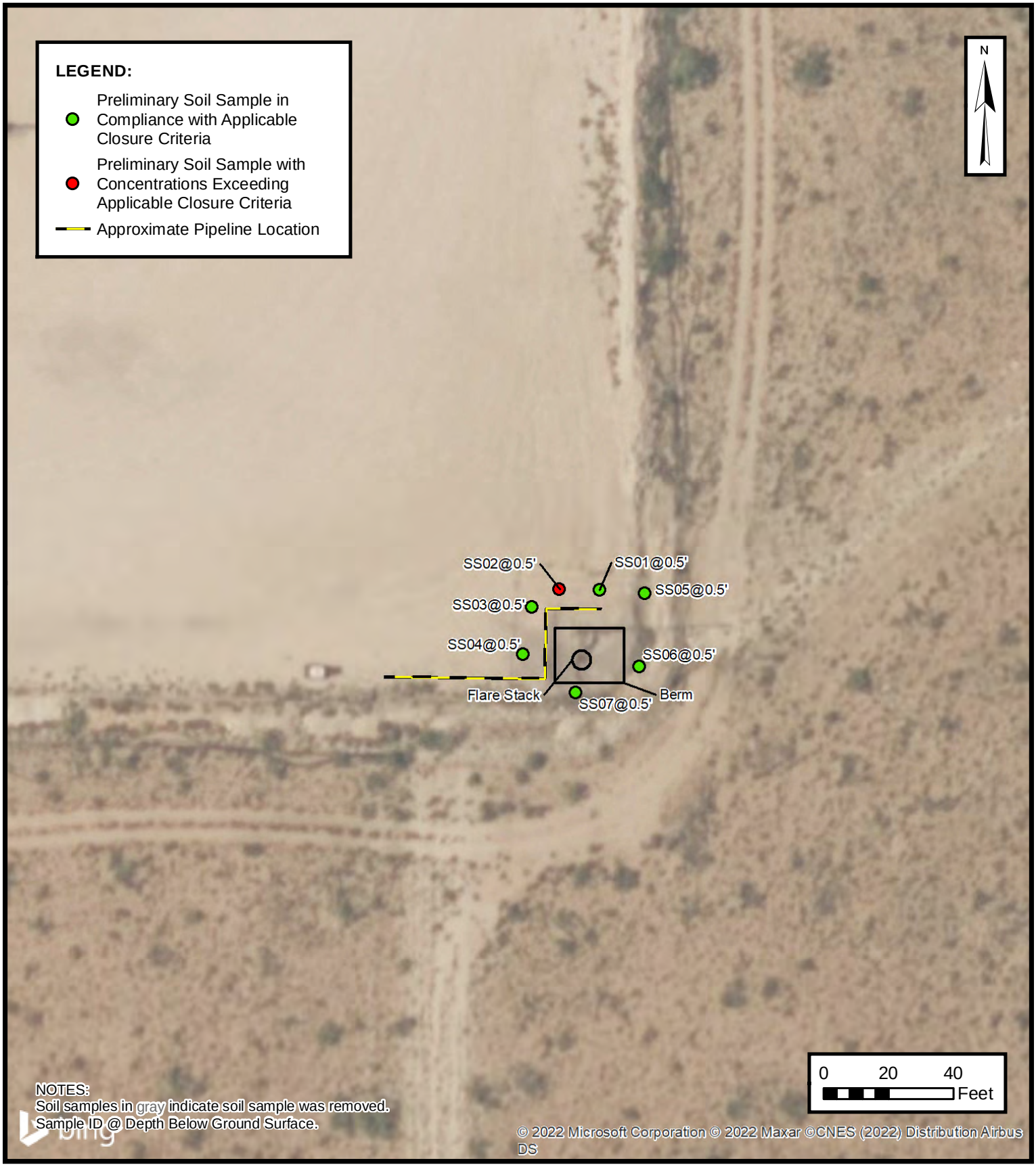
SITE RECEPTOR MAP

COG OPERATING, LLC
BROADCASTER 29 FEDERAL 003H
NAPP2132773092 & NAPP2201938653
Unit B, Sec 29 T23S R34E
Lea County, New Mexico

FIGURE
1



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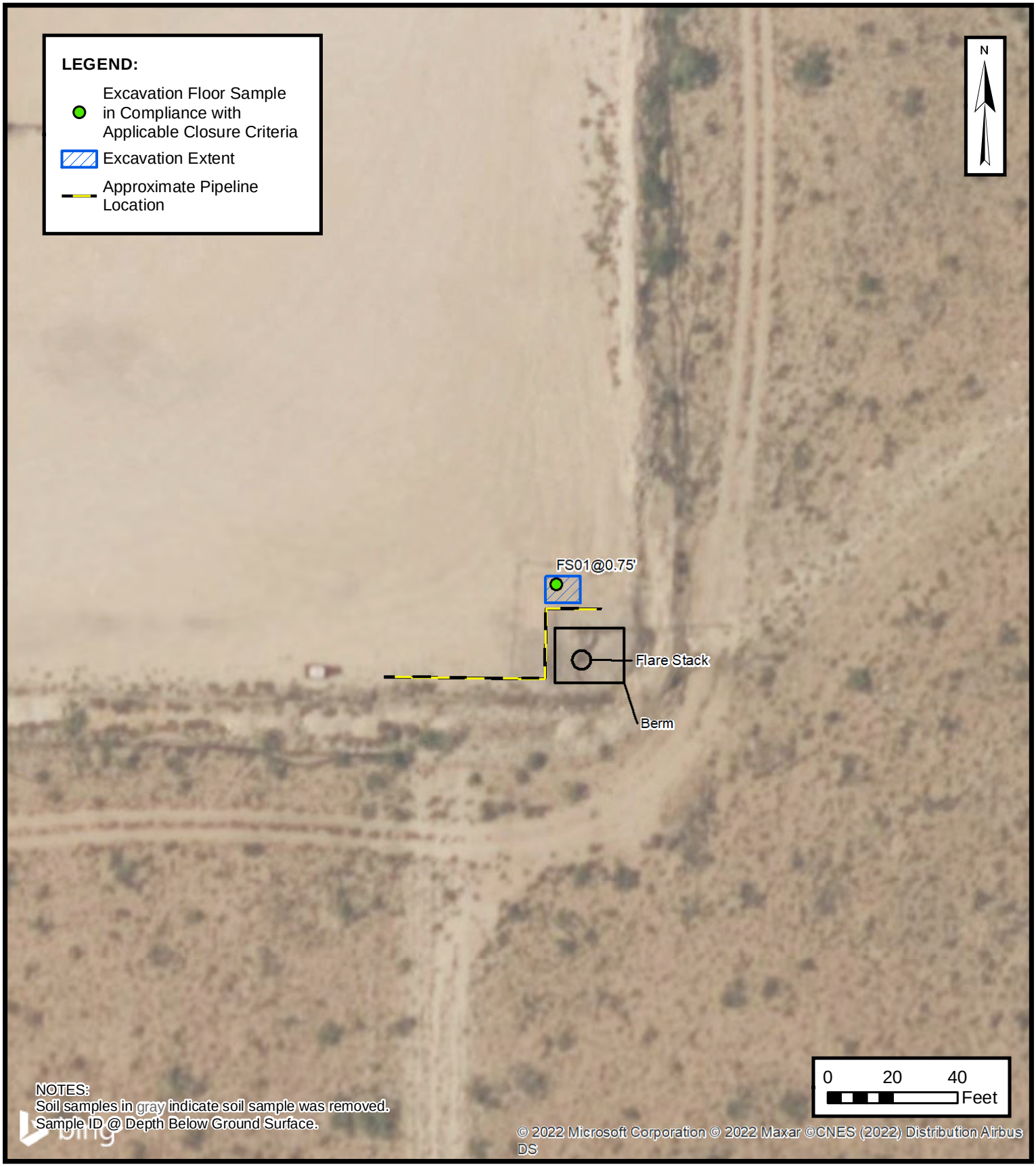
PRELIMINARY SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
BROADCASTER 29 FEDERAL 003H
NAPP2132773092 & NAPP2201938653
Unit B, Sec 29 T23S R34E
Lea County, New Mexico

FIGURE
2



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EXCAVATION SOIL SAMPLE LOCATIONS

COG OPERATING, LLC
BROADCASTER 29 FEDERAL 003H
NAPP2132773092 & NAPP2201938653
Unit B, Sec 29 T23S R34E
Lea County, New Mexico

FIGURE
3

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TABLE

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Broadcaster 29 Federal 003H
COG Operating, LLC
Lea County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Assessment Soil Samples										
SS01	01/07/2022	0.5	<0.00200	<0.00399	<49.9	271	<49.9	271	271	23.0
SS02	01/07/2022	0.5	<0.00199	<0.00398	<250	8,710	<250	**8,710**	**8,710**	122
SS03	01/07/2022	0.5	<0.00200	<0.00401	<49.9	283	<49.9	283	283	283
SS04	01/07/2022	0.5	<0.00199	<0.00398	<49.9	64.4	<49.9	64.4	64.4	77.1
SS05	03/29/2022	0.5	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	<49.8	<5.00
SS06	03/29/2022	0.5	<0.00201	<0.00402	<49.9	14.5	<49.9	14.5	14.5	59.3
SS07	03/29/2022	0.5	<0.00204	<0.00408	<50.0	<50.0	<50.0	<50.0	<50.0	6.94
Excavation Floor Soil Samples										
FS01	03/29/2022	0.75	<0.00198	<0.00396	<49.9	167	<49.9	167	167	22.3

Notes:

bgs: below ground surface
mg/kg: milligrams per kilogram
NMOCD: New Mexico Oil Conservation Division
BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes
Concentrations in bold exceed the NMOCD Table 1 Closure Criteria or reclamation standard where applicable.

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
* indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard for chloride in the top 4 feet is 600 mg/kg

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APPENDIX A

Referenced Well Records

Released to Imaging: 7/27/2022 10:14:02 AM
Received by OCD: 7/25/2022 12:52:28 PM

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

site_no list =

- 321734103290001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 321734103290001 23S.34E.16.333312

Available data for this site | Groundwater: Field measurements | GO

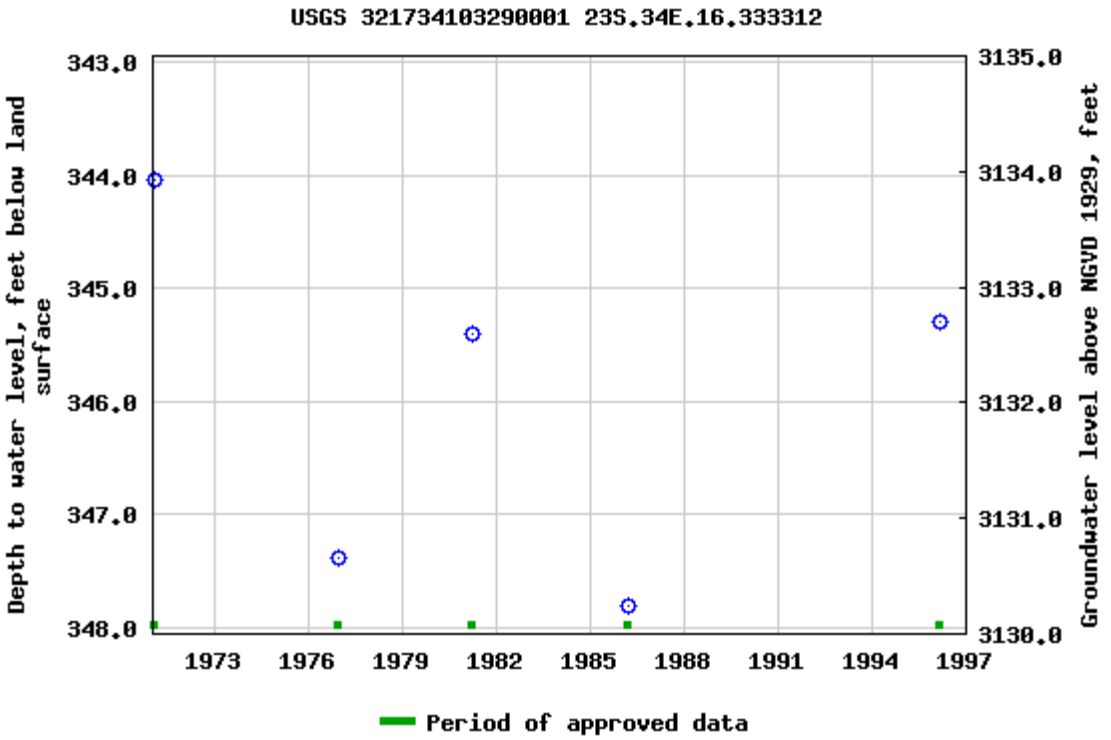
Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°17'53", Longitude 103°28'59" NAD27
Land-surface elevation 3,478.00 feet above NGVD29
The depth of the well is 400 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.

Released to Imaging: 7/27/2022 10:14:02 AM
Received by OCD: 7/25/2022 12:52:28 PM

This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms

Released to Imaging: 7/27/2022 10:14:02 AM
Received by OCD: 7/25/2022 12:52:28 PM

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

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

Groundwater levels for the Nation

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 321734103290001

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

USGS 321734103290001 23S.34E.16.333312

Lea County, New Mexico
Latitude 32°17'53", Longitude 103°28'59" NAD27
Land-surface elevation 3,478.00 feet above NGVD29
The depth of the well is 400 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
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Output formats

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

Released to Imaging: 7/27/2022 10:14:02 AM
Received by OCD: 7/25/2022 12:52:28 PM

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1971-01-13		D	62610		3133.95	NGVD29	1	Z			A
1971-01-13		D	62611		3135.58	NAVD88	1	Z			A
1971-01-13		D	72019	344.05			1	Z			A
1976-12-16		D	62610		3130.62	NGVD29	1	Z			A
1976-12-16		D	62611		3132.25	NAVD88	1	Z			A
1976-12-16		D	72019	347.38			1	Z			A
1981-03-30		D	62610		3132.60	NGVD29	1	Z			A
1981-03-30		D	62611		3134.23	NAVD88	1	Z			A
1981-03-30		D	72019	345.40			1	Z			A
1986-03-21		D	62610		3130.20	NGVD29	1	Z			A
1986-03-21		D	62611		3131.83	NAVD88	1	Z			A
1986-03-21		D	72019	347.80			1	Z			A
1996-03-08		D	62610		3132.70	NGVD29	1	S			A
1996-03-08		D	62611		3134.33	NAVD88	1	S			A
1996-03-08		D	72019	345.30			1	S			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Released to Imaging: 7/27/2022 10:14:02 AM

Received by OCD: 7/25/2022 12:52:28 PM

New Mexico Office of the State Engineer

Water Right Summary

get image list

WR File Number: CP 00618 **Subbasin:** CP **Cross Reference:** -

Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: ESTORIL PRODUCING CO.

x

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	475152	72121	1980-05-01	PMT	LOG	CP 00618	T		3	

x

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
CP 00618		Shallow	1	2	4	22	23S	34E	645713	3573539*	

***An (*) after northing value indicates 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.

Released to Imaging: 7/27/2022 10:14:02 AM

Received by OCD: 7/25/2022 12:52:28 PM

New Mexico Office of the State Engineer

Point of Diversion Summary

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

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 00618	1	2	4	22	23S	34E	645713	3573539*

Driller License:	46	**Driller Company:**	ABBOTT BROTHERS COMPANY		
Driller Name:	ABBOTT, MURRELL				
Drill Start Date:	05/01/1980	**Drill Finish Date:**	05/05/1980	**Plug Date:**	06/10/1981
Log File Date:	05/09/1980	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	428 feet	**Depth Water:**	295 feet

Water Bearing Stratifications:	Top	Bottom	Description
	295	428	Other/Unknown

Casing Perforations:	Top	Bottom
	358	428

***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.

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APPENDIX B

Photographic Log

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Photographic Log
COG Operating, LLC
Broadcaster 29 Federal 003H
Incident Numbers NAPP2132773092 & NAPP2201938653

Photograph 1
Date: January 7, 2022
Description: View during initial site assessment.

Photograph 2
Date: January 7, 2022
Description: View during initial site assessment.

Photograph 3
Date: March 29, 2022
Description: View of excavation activities.

Photograph 4
Date: March 29, 2022
Description: View of excavation activities.

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APPENDIX C

Laboratory Analytical Report

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2147-1
Laboratory Sample Delivery Group: 31403720.000 task 20.02
Client Project/Site: Broadcaster 29

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

JKramer

Authorized for release by:
4/8/2022 10:09:43 AM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Laboratory Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-2147-1
Project/Site: Broadcaster 29 SDG: 31403720.000 task 20.02

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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: WSP USA Inc. Job ID: 890-2147-1
Project/Site: Broadcaster 29 SDG: 31403720.000 task 20.02

Job ID: 890-2147-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2147-1

Comments
No additional comments.

Receipt
The sample was received on 3/29/2022 1:27 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 8.0° C.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-22613 and analytical batch 880-22684 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (MB 880-22659/1-A), (890-2143-A-21-O MS) and (890-2143-A-21-P MSD). 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.

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

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

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

Client Sample ID: FS01

Date Collected: 03/29/22 09:25
Date Received: 03/29/22 13:27
Sample Depth: 0.5

Lab Sample ID: 890-2147-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/31/22 11:00	03/31/22 15:15	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/31/22 11:00	03/31/22 15:15	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/31/22 11:00	03/31/22 15:15	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		03/31/22 11:00	03/31/22 15:15	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/31/22 11:00	03/31/22 15:15	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		03/31/22 11:00	03/31/22 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*03/31/22 11:00*	*03/31/22 15:15*	*1*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*	*03/31/22 11:00*	*03/31/22 15:15*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			03/31/22 16:27	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**167**		49.9		mg/Kg			03/31/22 08:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/30/22 14:43	03/31/22 01:13	1
Diesel Range Organics (Over C10-C28)	**167**		49.9		mg/Kg		03/30/22 14:43	03/31/22 01:13	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/30/22 14:43	03/31/22 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*03/30/22 14:43*	*03/31/22 01:13*	*1*
o-Terphenyl	*120*		*70 - 130*	*03/30/22 14:43*	*03/31/22 01:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22.3**		4.97		mg/Kg			04/08/22 07:04	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-2145-A-27-F MS	Matrix Spike	105	111										
890-2145-A-27-G MSD	Matrix Spike Duplicate	104	109										
890-2147-1	FS01	109	109										
LCS 880-22613/1-A	Lab Control Sample	102	112										
LCSD 880-22613/2-A	Lab Control Sample Dup	106	113										
MB 880-22613/5-A	Method Blank	104	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)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
890-2143-A-21-O MS	Matrix Spike	148 S1+	139 S1+										
890-2143-A-21-P MSD	Matrix Spike Duplicate	145 S1+	135 S1+										
890-2147-1	FS01	120	120										
LCS 880-22659/2-A	Lab Control Sample	103	93										
LCSD 880-22659/3-A	Lab Control Sample Dup	111	101										
MB 880-22659/1-A	Method Blank	146 S1+	160 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-22613/5-A
Matrix: Solid
Analysis Batch: 22684

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 22613

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/31/22 07:30	03/31/22 10:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/31/22 07:30	03/31/22 10:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/31/22 07:30	03/31/22 10:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/31/22 07:30	03/31/22 10:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/31/22 07:30	03/31/22 10:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/31/22 07:30	03/31/22 10:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*03/31/22 07:30*	*03/31/22 10:26*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*03/31/22 07:30*	*03/31/22 10:26*	*1*

Lab Sample ID: LCS 880-22613/1-A
Matrix: Solid
Analysis Batch: 22684

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22613

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1005		mg/Kg		101	70 - 130		
Toluene			0.100	0.09948		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.1004		mg/Kg		100	70 - 130		
m-Xylene & p-Xylene			0.200	0.2087		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1007		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 880-22613/2-A
Matrix: Solid
Analysis Batch: 22684

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 22613

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.09921		mg/Kg		99	70 - 130	1	35
Toluene			0.100	0.09749		mg/Kg		97	70 - 130	2	35
Ethylbenzene			0.100	0.1001		mg/Kg		100	70 - 130	0	35
m-Xylene & p-Xylene			0.200	0.2082		mg/Kg		104	70 - 130	0	35
o-Xylene			0.100	0.1013		mg/Kg		101	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 890-2145-A-27-F MS
Matrix: Solid
Analysis Batch: 22684

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 22613

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00201	U F1 F2	0.0996	0.09005		mg/Kg		90	70 - 130		
Toluene	0.00281	F1 F2	0.0996	0.08700		mg/Kg		85	70 - 130		

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

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

Lab Sample ID: 890-2145-A-27-F MS
Matrix: Solid
Analysis Batch: 22684

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 22613

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U F1 F2	0.0996	0.08603		mg/Kg		85	70 - 130
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.199	0.1777		mg/Kg		88	70 - 130
o-Xylene	0.00245	F1 F2	0.0996	0.08670		mg/Kg		85	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

Lab Sample ID: 890-2145-A-27-G MSD
Matrix: Solid
Analysis Batch: 22684

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 22613

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1 F2	0.101	0.03291	F1 F2	mg/Kg		32	70 - 130	93	35
Toluene	0.00281	F1 F2	0.101	0.03429	F1 F2	mg/Kg		31	70 - 130	87	35
Ethylbenzene	<0.00201	U F1 F2	0.101	0.03471	F1 F2	mg/Kg		33	70 - 130	85	35
m-Xylene & p-Xylene	<0.00402	U F1 F2	0.201	0.07523	F1 F2	mg/Kg		36	70 - 130	81	35
o-Xylene	0.00245	F1 F2	0.101	0.04224	F1 F2	mg/Kg		40	70 - 130	69	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-22659/1-A
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 22659

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/30/22 14:43	03/30/22 16:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/30/22 14:43	03/30/22 16:31	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/30/22 14:43	03/30/22 16:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*146*	*S1+*	*70 - 130*	*03/30/22 14:43*	*03/30/22 16:31*	*1*
o-Terphenyl	*160*	*S1+*	*70 - 130*	*03/30/22 14:43*	*03/30/22 16:31*	*1*

Lab Sample ID: LCS 880-22659/2-A
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22659

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	926.1		mg/Kg		93	70 - 130
Diesel Range Organics (Over C10-C28)			1000	891.8		mg/Kg		89	70 - 130

Eurofins Carlsbad

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

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

Lab Sample ID: LCS 880-22659/2-A
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22659

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	93		70 - 130

Lab Sample ID: LCSD 880-22659/3-A
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 22659

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	929.5		mg/Kg		93	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	936.7		mg/Kg		94	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	111		70 - 130
o-Terphenyl	101		70 - 130

Lab Sample ID: 890-2143-A-21-O MS
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 22659

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1025		mg/Kg		103	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	934.7		mg/Kg		94	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	148	S1+	70 - 130
o-Terphenyl	139	S1+	70 - 130

Lab Sample ID: 890-2143-A-21-P MSD
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 22659

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	995	1017		mg/Kg		102	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<50.0	U	995	911.3		mg/Kg		92	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	145	S1+	70 - 130
o-Terphenyl	135	S1+	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-22997/1-A
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/08/22 04:33	1

Lab Sample ID: LCS 880-22997/2-A
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.2		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-22997/3-A
Matrix: Solid
Analysis Batch: 23131

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	244.6		mg/Kg		98	90 - 110	2	20

Lab Sample ID: 890-2142-A-22-F MS
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	284		249	515.7		mg/Kg		93	90 - 110		

Lab Sample ID: 890-2142-A-22-G MSD
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	284		249	518.1		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-2147-1
Project/Site: Broadcaster 29 SDG: 31403720.000 task 20.02

GC VOA

Prep Batch: 22613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Total/NA	Solid	5035	
MB 880-22613/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-22613/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-22613/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2145-A-27-F MS	Matrix Spike	Total/NA	Solid	5035	
890-2145-A-27-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 22684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Total/NA	Solid	8021B	22613
MB 880-22613/5-A	Method Blank	Total/NA	Solid	8021B	22613
LCS 880-22613/1-A	Lab Control Sample	Total/NA	Solid	8021B	22613
LCSD 880-22613/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	22613
890-2145-A-27-F MS	Matrix Spike	Total/NA	Solid	8021B	22613
890-2145-A-27-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	22613

Analysis Batch: 22749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 22606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Total/NA	Solid	8015B NM	22659
MB 880-22659/1-A	Method Blank	Total/NA	Solid	8015B NM	22659
LCS 880-22659/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	22659
LCSD 880-22659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	22659
890-2143-A-21-O MS	Matrix Spike	Total/NA	Solid	8015B NM	22659
890-2143-A-21-P MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	22659

Prep Batch: 22659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Total/NA	Solid	8015NM Prep	
MB 880-22659/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-22659/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-22659/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2143-A-21-O MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2143-A-21-P MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 22696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 22997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Soluble	Solid	DI Leach	
MB 880-22997/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-22997/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-22997/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-2147-1
Project/Site: Broadcaster 29 SDG: 31403720.000 task 20.02

HPLC/IC (Continued)

Leach Batch: 22997 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2142-A-22-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2142-A-22-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2147-1	FS01	Soluble	Solid	300.0	22997
MB 880-22997/1-A	Method Blank	Soluble	Solid	300.0	22997
LCS 880-22997/2-A	Lab Control Sample	Soluble	Solid	300.0	22997
LCSD 880-22997/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	22997
890-2142-A-22-F MS	Matrix Spike	Soluble	Solid	300.0	22997
890-2142-A-22-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	22997

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

Client Sample ID: FS01
Date Collected: 03/29/22 09:25
Date Received: 03/29/22 13:27

Lab Sample ID: 890-2147-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	22613	03/31/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22684	03/31/22 15:15	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22749	03/31/22 16:27	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22696	03/31/22 08:59	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	22659	03/30/22 14:43	AM	XEN MID
Total/NA	Analysis	8015B NM		1			22606	03/31/22 01:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	22997	04/05/22 09:20	CH	XEN MID
Soluble	Analysis	300.0		1			23131	04/08/22 07:04	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-2147-1
Project/Site: Broadcaster 29 SDG: 31403720.000 task 20.02

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	T104704400-21-22	06-30-22

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

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

Method Summary

Client: WSP USA Inc. Job ID: 890-2147-1
Project/Site: Broadcaster 29 SDG: 31403720.000 task 20.02

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2147-1
SDG: 31403720.000 task 20.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2147-1	FS01	Solid	03/29/22 09:25	03/29/22 13:27	0.5

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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)
www.xenco.com

4/8/2022

Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennings
Company Name:	WSP USA	Company Name:	WSP USA
Address:	3300 North A Street Building 1, unit 222	Address:	3300 North A Street Building 1, unit 222
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Midland, Texas 79705
Phone:	817-683-2503	Email:	Kalei.jennings@wsp.com

Work Order Comments

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

Project Name:	Broadcaster 29	Turn Around	
Project Number:	31403720.000 task 20.02	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Payton Benner CP - Cooling in Progress	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	8.2/8.0	Thermometer ID	IR-007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	03/29/22	9:25	0.5	1	X	X	X

890-2147 Chain of Custody

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

COMPOSITE

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 Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	[signature]	[signature]	3292213227			
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 7/25/2022 12:52:28 PM

Released to Imaging: 7/27/2022 10:14:02 AM

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone: 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Kramer, Jessica	Carrier Tracking No(s):	COC No: 890-691 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-2147-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 4/4/2022			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Broadcaster 29	Project #: 89000048			
Site:	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
FS01 (890-2147-1)	3/29/22	09 25 Mountain		Solid			X	X	X	X	X	1	

Preservation Codes

A - HCL	M Hexane
B NaOH	N None
C Zn Acetate	O AsNaO2
D Nitric Acid	P Na2O4S
E NaHSO4	Q - Na2SO3
F MeOH	R Na2S2O3
G Amchlor	S - H2SO4
H - Ascorbic Acid	T TSP Dodecahydrate
I Ice	U - Acetone
J - DI Water	V - MCAA
K EDTA	W - pH 4-5
L EDA	Z other (specify)

Other:

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III, IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Clee Cuff 3 29 22	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

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Received by OCD: 7/25/2022 12:52:28 PM
4/8/2022
Page 18 of 20
Released to Imaging: 7/27/2022 10:14:02 AM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-2147-1
SDG Number: 31403720.000 task 20.02

Login Number: 2147
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.	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	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-2147-1
SDG Number: 31403720.000 task 20.02

Login Number: 2147
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 03/30/22 11:54 AM

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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").	True	

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ANALYTICAL REPORT

Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Tel: (575)988-3199

Laboratory Job ID: 890-2148-1
Laboratory Sample Delivery Group: 31403720.0000 task20.02
Client Project/Site: Broadcaster 29

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

JKramer

Authorized for release by:
4/8/2022 10:09:58 AM

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

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Laboratory Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 890-2148-1
Project/Site: Broadcaster 29 SDG: 31403720.0000 task20.02

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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

Case Narrative

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Job ID: 890-2148-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2148-1

Receipt
The samples were received on 3/29/2022 1:27 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 8.0°C

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

GC Semi VOA
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: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Client Sample ID: SS05

Lab Sample ID: 890-2148-1
Matrix: Solid
Date Collected: 03/29/22 09:40
Date Received: 03/29/22 13:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/31/22 12:00	03/31/22 22:32	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/31/22 12:00	03/31/22 22:32	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/31/22 12:00	03/31/22 22:32	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/31/22 12:00	03/31/22 22:32	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/31/22 12:00	03/31/22 22:32	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/31/22 12:00	03/31/22 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*03/31/22 12:00*	*03/31/22 22:32*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*03/31/22 12:00*	*03/31/22 22:32*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			04/01/22 15:18	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/31/22 08:59	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/30/22 10:05	03/30/22 15:05	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/30/22 10:05	03/30/22 15:05	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/30/22 10:05	03/30/22 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*122*		*70 - 130*	*03/30/22 10:05*	*03/30/22 15:05*	*1*
o-Terphenyl	*120*		*70 - 130*	*03/30/22 10:05*	*03/30/22 15:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/08/22 07:10	1

Client Sample ID: SS06

Lab Sample ID: 890-2148-2
Matrix: Solid
Date Collected: 03/29/22 09:42
Date Received: 03/29/22 13:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/31/22 12:00	03/31/22 22:53	1
Toluene	**0.00242**		0.00201		mg/Kg		03/31/22 12:00	03/31/22 22:53	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/31/22 12:00	03/31/22 22:53	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/31/22 12:00	03/31/22 22:53	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/31/22 12:00	03/31/22 22:53	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/31/22 12:00	03/31/22 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*149*	*S1+*	*70 - 130*	*03/31/22 12:00*	*03/31/22 22:53*	*1*

Client Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Client Sample ID: SS06

Lab Sample ID: 890-2148-2
Matrix: Solid
Date Collected: 03/29/22 09:42
Date Received: 03/29/22 13:27
Sample Depth: 0.5

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/31/22 12:00*	*03/31/22 22:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			04/01/22 15:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**14.5**		49.9	mg/Kg			03/31/22 08:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/30/22 10:05	03/30/22 15:27	1
Diesel Range Organics (Over C10-C28)	**14.5**		49.9	mg/Kg		03/30/22 10:05	03/30/22 15:27	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/30/22 10:05	03/30/22 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*120*		*70 - 130*	*03/30/22 10:05*	*03/30/22 15:27*	*1*
o-Terphenyl	*117*		*70 - 130*	*03/30/22 10:05*	*03/30/22 15:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**59.3**		5.00	mg/Kg			04/08/22 08:20	1

Client Sample ID: SS07

Lab Sample ID: 890-2148-3
Matrix: Solid
Date Collected: 03/29/22 09:44
Date Received: 03/29/22 13:27
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00204	U	0.00204	mg/Kg		03/31/22 12:00	03/31/22 23:13	1
Toluene	<0.00204	U	0.00204	mg/Kg		03/31/22 12:00	03/31/22 23:13	1
Ethylbenzene	<0.00204	U	0.00204	mg/Kg		03/31/22 12:00	03/31/22 23:13	1
m-Xylene & p-Xylene	<0.00408	U	0.00408	mg/Kg		03/31/22 12:00	03/31/22 23:13	1
o-Xylene	<0.00204	U	0.00204	mg/Kg		03/31/22 12:00	03/31/22 23:13	1
Xylenes, Total	<0.00408	U	0.00408	mg/Kg		03/31/22 12:00	03/31/22 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*03/31/22 12:00*	*03/31/22 23:13*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/31/22 12:00*	*03/31/22 23:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00408	U	0.00408	mg/Kg			04/01/22 15:18	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/31/22 08:59	1

Eurofins Carlsbad

Client Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Client Sample ID: SS07

Date Collected: 03/29/22 09:44
Date Received: 03/29/22 13:27
Sample Depth: 0.5

Lab Sample ID: 890-2148-3

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/30/22 10:05	03/30/22 15:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/30/22 10:05	03/30/22 15:48	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/30/22 10:05	03/30/22 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*112*		*70 - 130*	*03/30/22 10:05*	*03/30/22 15:48*	*1*
o-Terphenyl	*111*		*70 - 130*	*03/30/22 10:05*	*03/30/22 15:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.94**		5.00		mg/Kg			04/08/22 08:26	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-12957-A-1-L MSD	Matrix Spike Duplicate	100	108										
880-12957-A-1-N MS	Matrix Spike	103	111										
890-2148-1	SS05	141 S1+	102										
890-2148-2	SS06	149 S1+	97										
890-2148-3	SS07	118	100										
LCS 880-22658/1-A	Lab Control Sample	97	105										
LCSD 880-22658/2-A	Lab Control Sample Dup	97	107										
MB 880-22658/5-A	Method Blank	118	100										

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
		1CO1	OTPH1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-13046-A-1-D MS	Matrix Spike	130	122										
880-13046-A-1-E MSD	Matrix Spike Duplicate	119	112										
890-2148-1	SS05	122	120										
890-2148-2	SS06	120	117										
890-2148-3	SS07	112	111										
LCS 880-22621/2-A	Lab Control Sample	99	90										
LCSD 880-22621/3-A	Lab Control Sample Dup	107	96										
MB 880-22621/1-A	Method Blank	144 S1+	155 S1+										

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-22658/5-A
Matrix: Solid
Analysis Batch: 22719

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 22658

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/31/22 12:00	03/31/22 15:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/31/22 12:00	03/31/22 15:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/31/22 12:00	03/31/22 15:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/31/22 12:00	03/31/22 15:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/31/22 12:00	03/31/22 15:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/31/22 12:00	03/31/22 15:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*03/31/22 12:00*	*03/31/22 15:35*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/31/22 12:00*	*03/31/22 15:35*	*1*

Lab Sample ID: LCS 880-22658/1-A
Matrix: Solid
Analysis Batch: 22719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22658

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1059		mg/Kg		106	70 - 130		
Toluene			0.100	0.08868		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.09566		mg/Kg		96	70 - 130		
m-Xylene & p-Xylene			0.200	0.2009		mg/Kg		100	70 - 130		
o-Xylene			0.100	0.09872		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-22658/2-A
Matrix: Solid
Analysis Batch: 22719

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 22658

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1028		mg/Kg		103	70 - 130	3	35
Toluene			0.100	0.08247		mg/Kg		82	70 - 130	7	35
Ethylbenzene			0.100	0.08947		mg/Kg		89	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1885		mg/Kg		94	70 - 130	6	35
o-Xylene			0.100	0.09437		mg/Kg		94	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: 880-12957-A-1-L MSD
Matrix: Solid
Analysis Batch: 22719

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 22658

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	0.08510		mg/Kg		85	70 - 130	4	35
Toluene	<0.00202	U F1	0.0996	0.06941	F1	mg/Kg		69	70 - 130	5	35

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

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

Lab Sample ID: 880-12957-A-1-L MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 22719 — **Prep Batch: 22658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene	<0.00202	U	0.0996	0.07530		mg/Kg		76	70 - 130	3	35
m-Xylene & p-Xylene	<0.00404	U	0.199	0.1580		mg/Kg		79	70 - 130	3	35
o-Xylene	<0.00202	U	0.0996	0.07836		mg/Kg		79	70 - 130	4	35

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

Lab Sample ID: 880-12957-A-1-N MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 22719 — **Prep Batch: 22658**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U	0.0992	0.08872		mg/Kg		89	70 - 130
Toluene	<0.00202	U F1	0.0992	0.07307		mg/Kg		73	70 - 130
Ethylbenzene	<0.00202	U	0.0992	0.07727		mg/Kg		78	70 - 130
m-Xylene & p-Xylene	<0.00404	U	0.198	0.1629		mg/Kg		82	70 - 130
o-Xylene	<0.00202	U	0.0992	0.08143		mg/Kg		82	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*

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

Lab Sample ID: MB 880-22621/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 22606 — **Prep Batch: 22621**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/30/22 10:05	03/30/22 10:35	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/30/22 10:05	03/30/22 10:35	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/30/22 10:05	03/30/22 10:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*144*	*S1+*	*70 - 130*	*03/30/22 10:05*	*03/30/22 10:35*	*1*
o-Terphenyl	*155*	*S1+*	*70 - 130*	*03/30/22 10:05*	*03/30/22 10:35*	*1*

Lab Sample ID: LCS 880-22621/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 22606 — **Prep Batch: 22621**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	807.8		mg/Kg		81	70 - 130
Diesel Range Organics (Over C10-C28)			1000	810.5		mg/Kg		81	70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

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

Lab Sample ID: LCS 880-22621/2-A
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 22621

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	90		70 - 130

Lab Sample ID: LCSD 880-22621/3-A
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 22621

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	834.6		mg/Kg		83	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	874.6		mg/Kg		87	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 880-13046-A-1-D MS
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 22621

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	998	848.3		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	998	825.6		mg/Kg		83	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	130		70 - 130
o-Terphenyl	122		70 - 130

Lab Sample ID: 880-13046-A-1-E MSD
Matrix: Solid
Analysis Batch: 22606

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 22621

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	998	864.3		mg/Kg		87	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	998	761.8		mg/Kg		76	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	119		70 - 130
o-Terphenyl	112		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-22997/1-A
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/08/22 04:33	1

Lab Sample ID: LCS 880-22997/2-A
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	250.2		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-22997/3-A
Matrix: Solid
Analysis Batch: 23131

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	244.6		mg/Kg		98	90 - 110	2	20

Lab Sample ID: 890-2142-A-22-F MS
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	284		249	515.7		mg/Kg		93	90 - 110		

Lab Sample ID: 890-2142-A-22-G MSD
Matrix: Solid
Analysis Batch: 23131

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	284		249	518.1		mg/Kg		94	90 - 110	0	20

QC Association Summary

Client: WSP USA Inc. Job ID: 890-2148-1
Project/Site: Broadcaster 29 SDG: 31403720.0000 task20.02

GC VOA

Prep Batch: 22658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Total/NA	Solid	5035	
890-2148-2	SS06	Total/NA	Solid	5035	
890-2148-3	SS07	Total/NA	Solid	5035	
MB 880-22658/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-22658/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-22658/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12957-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
880-12957-A-1-N MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 22719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Total/NA	Solid	8021B	22658
890-2148-2	SS06	Total/NA	Solid	8021B	22658
890-2148-3	SS07	Total/NA	Solid	8021B	22658
MB 880-22658/5-A	Method Blank	Total/NA	Solid	8021B	22658
LCS 880-22658/1-A	Lab Control Sample	Total/NA	Solid	8021B	22658
LCSD 880-22658/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	22658
880-12957-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	22658
880-12957-A-1-N MS	Matrix Spike	Total/NA	Solid	8021B	22658

Analysis Batch: 22833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Total/NA	Solid	Total BTEX	
890-2148-2	SS06	Total/NA	Solid	Total BTEX	
890-2148-3	SS07	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 22606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Total/NA	Solid	8015B NM	22621
890-2148-2	SS06	Total/NA	Solid	8015B NM	22621
890-2148-3	SS07	Total/NA	Solid	8015B NM	22621
MB 880-22621/1-A	Method Blank	Total/NA	Solid	8015B NM	22621
LCS 880-22621/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	22621
LCSD 880-22621/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	22621
880-13046-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	22621
880-13046-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	22621

Prep Batch: 22621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Total/NA	Solid	8015NM Prep	
890-2148-2	SS06	Total/NA	Solid	8015NM Prep	
890-2148-3	SS07	Total/NA	Solid	8015NM Prep	
MB 880-22621/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-22621/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-22621/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13046-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13046-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc. Job ID: 890-2148-1
Project/Site: Broadcaster 29 SDG: 31403720.0000 task20.02

GC Semi VOA

Analysis Batch: 22693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Total/NA	Solid	8015 NM	
890-2148-2	SS06	Total/NA	Solid	8015 NM	
890-2148-3	SS07	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 22997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Soluble	Solid	DI Leach	
890-2148-2	SS06	Soluble	Solid	DI Leach	
890-2148-3	SS07	Soluble	Solid	DI Leach	
MB 880-22997/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-22997/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-22997/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2142-A-22-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2142-A-22-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 23131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2148-1	SS05	Soluble	Solid	300.0	22997
890-2148-2	SS06	Soluble	Solid	300.0	22997
890-2148-3	SS07	Soluble	Solid	300.0	22997
MB 880-22997/1-A	Method Blank	Soluble	Solid	300.0	22997
LCS 880-22997/2-A	Lab Control Sample	Soluble	Solid	300.0	22997
LCSD 880-22997/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	22997
890-2142-A-22-F MS	Matrix Spike	Soluble	Solid	300.0	22997
890-2142-A-22-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	22997

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Client Sample ID: SS05

Date Collected: 03/29/22 09:40
Date Received: 03/29/22 13:27

Lab Sample ID: 890-2148-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	22658	03/31/22 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22719	03/31/22 22:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22833	04/01/22 15:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22693	03/31/22 08:59	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	22621	03/30/22 10:05	AM	XEN MID
Total/NA	Analysis	8015B NM		1			22606	03/30/22 15:05	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22997	04/05/22 09:20	CH	XEN MID
Soluble	Analysis	300.0		1			23131	04/08/22 07:10	CH	XEN MID

Client Sample ID: SS06

Date Collected: 03/29/22 09:42
Date Received: 03/29/22 13:27

Lab Sample ID: 890-2148-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	22658	03/31/22 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22719	03/31/22 22:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22833	04/01/22 15:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22693	03/31/22 08:59	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	22621	03/30/22 10:05	AM	XEN MID
Total/NA	Analysis	8015B NM		1			22606	03/30/22 15:27	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22997	04/05/22 09:20	CH	XEN MID
Soluble	Analysis	300.0		1			23131	04/08/22 08:20	CH	XEN MID

Client Sample ID: SS07

Date Collected: 03/29/22 09:44
Date Received: 03/29/22 13:27

Lab Sample ID: 890-2148-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.9 g	5 mL	22658	03/31/22 12:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22719	03/31/22 23:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22833	04/01/22 15:18	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22693	03/31/22 08:59	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22621	03/30/22 10:05	AM	XEN MID
Total/NA	Analysis	8015B NM		1			22606	03/30/22 15:48	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	22997	04/05/22 09:20	CH	XEN MID
Soluble	Analysis	300.0		1			23131	04/08/22 08:26	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 890-2148-1
Project/Site: Broadcaster 29 SDG: 31403720.0000 task20.02

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	T104704400-21-22	06-30-22

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

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

Method Summary

Client: WSP USA Inc. Job ID: 890-2148-1
Project/Site: Broadcaster 29 SDG: 31403720.0000 task20.02

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Broadcaster 29

Job ID: 890-2148-1
SDG: 31403720.0000 task20.02

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2148-1	SS05	Solid	03/29/22 09:40	03/29/22 13:27	0.5
890-2148-2	SS06	Solid	03/29/22 09:42	03/29/22 13:27	0.5
890-2148-3	SS07	Solid	03/29/22 09:44	03/29/22 13:27	0.5

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Chain of Custody

Work Order No: _____

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

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Project Manager:	Kalei Jennings	Bill to: (if different)	Kalei Jennings
Company Name:	WSP USA	Company Name:	WSP USA
Address:	3300 North A Street Building 1, unit 222	Address:	3300 North A Street Building 1, unit 222
City, State ZIP:	Midland, Texas 79705	City, State ZIP:	Midland, Texas 79705
Phone:	817-683-2503	Email:	Kalei.jennings@wsp.com

Work Order Comments

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

Project Name:	Broadcaster 29	Turn Around	
Project Number:	31403720.000 task 20.02	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Payton Benner	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	8.2 / 8.0	Thermometer ID		
Received Intact:	(Yes) No		INM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS05	S	03/29/22	9:40	0.5	1	X	X	X
SS06	S	03/29/22	9:42	0.5	1	X	X	X
SS07	S	03/29/22	9:44	0.5	1	X	X	X

890-2148 Chain of Custody

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

DISCRETE
DISCRETE
DISCRETE

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 Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		3292213271			
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

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4/8/2022

Received by OCD: 7/25/2022 12:52:28 PM

Released to Imaging: 7/27/2022 10:14:02 AM

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Eurofins Carlsbad
1089 N Canal St.
Carlsbad, NM 88220
Phone 575-988-3199 Fax: 575-988-3199

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-691 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jessica kramer@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Louisiana, NELAP - Texas		Job #: 890-2148-1
Address: 1211 W Florida Ave, ,	Due Date Requested: 4/4/2022			
City: Midland	TAT Requested (days):			
State, Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: Broadcaster 29	Project #: 89000048			
Site	SSOW#:			

Analysis Requested

Preservation Codes

A HCL	M - Hexane
B - NaOH	N None
C Zn Acetate	O AsNaO2
D - Nitric Acid	P Na2O4S
E NaHSO4	Q Na2SO3
F MeOH	R Na2S2O3
G Amchlor	S H2SO4
H Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U Acetone
J - DI Water	V - MCAA
K - EDTA	W pH 4-5
L EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep Full TPH	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc BTEX	Total_BTEX_GCV	8015MOD_Calc	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
SS05 (890-2148-1)	3/29/22	09 40 Mountain		Solid			X	X	X	X	X	1	
SS06 (890-2148-2)	3/29/22	09 42 Mountain		Solid			X	X	X	X	X	1	
SS07 (890-2148-3)	3/29/22	09 44 Mountain		Solid			X	X	X	X	X	1	

Note. Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I, II III IV Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by: Clue Cup 3 29 20	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

Received by OCD: 7/25/2022 12:52:28 PM
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4/8/2022
Released to Imaging: 7/27/2022 10:14:02 AM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-2148-1
SDG Number: 31403720.0000 task20.02

Login Number: 2148
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.	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	

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 890-2148-1
SDG Number: 31403720.0000 task20.02

Login Number: 2148
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 03/30/22 11:54 AM

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.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
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").	True	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-9168-1
Laboratory Sample Delivery Group: 32.282, -103.49
Client Project/Site: Broadcaster 29 Federal 0003H

For:
WSP USA Inc.
2777 N. Stemmons Freeway
Suite 1600
Dallas, Texas 75207

Attn: Kalei Jennings

JKramer

Authorized for release by:
12/14/2021 2:13:07 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Laboratory Job ID: 880-9168-1
SDG: 32.282, -103.49

Table of Contents

Definitions/Glossary

Client: WSP USA Inc. Job ID: 880-9168-1
Project/Site: Broadcaster 29 Federal 0003H SDG: 32.282, -103.49

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Job ID: 880-9168-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-9168-1

Receipt
The samples were received on 12/9/2021 9:39 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 4.2°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-14352 and analytical batch 880-14356 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: SS02 (880-9168-2). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-14498 and analytical batch 880-14772 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Client Sample ID: SS01

Lab Sample ID: 880-9168-1
Matrix: Solid
Date Collected: 12/07/21 09:33
Date Received: 12/09/21 09:39
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:55	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		12/09/21 10:15	12/09/21 14:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:55	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/09/21 10:15	12/09/21 14:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*12/09/21 10:15*	*12/09/21 14:55*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*12/09/21 10:15*	*12/09/21 14:55*	*1*

Method: 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			12/10/21 14:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**271**		49.9		mg/Kg			12/13/21 12:32	1

Method: 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		12/10/21 15:20	12/10/21 22:10	1
Diesel Range Organics (Over C10-C28)	**271**	**F1**	49.9		mg/Kg		12/10/21 15:20	12/10/21 22:10	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/10/21 15:20	12/10/21 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*12/10/21 15:20*	*12/10/21 22:10*	*1*
o-Terphenyl	*92*		*70 - 130*	*12/10/21 15:20*	*12/10/21 22:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**23.0**		4.98		mg/Kg			12/14/21 09:56	1

Client Sample ID: SS02

Lab Sample ID: 880-9168-2
Matrix: Solid
Date Collected: 12/07/21 10:40
Date Received: 12/09/21 09:39
Sample Depth: 0.5

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 15:15	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 15:15	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 15:15	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/09/21 10:15	12/09/21 15:15	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 15:15	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/09/21 10:15	12/09/21 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*12/09/21 10:15*	*12/09/21 15:15*	*1*

Eurofins Xenco, Midland

Client Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Client Sample ID: SS02

Date Collected: 12/07/21 10:40
Date Received: 12/09/21 09:39
Sample Depth: 0.5

Lab Sample ID: 880-9168-2

Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*12/09/21 10:15*	*12/09/21 15:15*	*1*

Method: 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			12/10/21 14:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**8710**		250		mg/Kg			12/13/21 12:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<250	U	250		mg/Kg		12/10/21 15:20	12/10/21 23:12	5
Diesel Range Organics (Over C10-C28)	**8710**		250		mg/Kg		12/10/21 15:20	12/10/21 23:12	5
OII Range Organics (Over C28-C36)	<250	U	250		mg/Kg		12/10/21 15:20	12/10/21 23:12	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*65*	*S1-*	*70 - 130*	*12/10/21 15:20*	*12/10/21 23:12*	*5*
o-Terphenyl	*98*		*70 - 130*	*12/10/21 15:20*	*12/10/21 23:12*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**122**		4.99		mg/Kg			12/14/21 10:16	1

Client Sample ID: SS03

Date Collected: 12/07/21 09:40
Date Received: 12/09/21 09:39
Sample Depth: 0.5

Lab Sample ID: 880-9168-3

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 15:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 15:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 15:36	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		12/09/21 10:15	12/09/21 15:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 15:36	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		12/09/21 10:15	12/09/21 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*12/09/21 10:15*	*12/09/21 15:36*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*12/09/21 10:15*	*12/09/21 15:36*	*1*

Method: 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			12/10/21 14:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**283**		49.9		mg/Kg			12/13/21 12:32	1

Eurofins Xenco, Midland

Client Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Client Sample ID: SS03

Date Collected: 12/07/21 09:40
Date Received: 12/09/21 09:39
Sample Depth: 0.5

Lab Sample ID: 880-9168-3

Matrix: Solid

Method: 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		12/10/21 15:20	12/10/21 23:33	1
Diesel Range Organics (Over C10-C28)	**283**		49.9		mg/Kg		12/10/21 15:20	12/10/21 23:33	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/10/21 15:20	12/10/21 23:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*88*		*70 - 130*	*12/10/21 15:20*	*12/10/21 23:33*	*1*
o-Terphenyl	*86*		*70 - 130*	*12/10/21 15:20*	*12/10/21 23:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**283**		5.00		mg/Kg			12/14/21 10:23	1

Client Sample ID: SS04

Date Collected: 12/07/21 09:42
Date Received: 12/09/21 09:39
Sample Depth: 0.5

Lab Sample ID: 880-9168-4

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 19:29	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 19:29	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 19:29	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		12/09/21 10:15	12/09/21 19:29	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/09/21 10:15	12/09/21 19:29	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/09/21 10:15	12/09/21 19:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*12/09/21 10:15*	*12/09/21 19:29*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*12/09/21 10:15*	*12/09/21 19:29*	*1*

Method: 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			12/10/21 14:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**64.4**		49.9		mg/Kg			12/13/21 12:32	1

Method: 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		12/10/21 15:20	12/10/21 23:54	1
Diesel Range Organics (Over C10-C28)	**64.4**		49.9		mg/Kg		12/10/21 15:20	12/10/21 23:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/10/21 15:20	12/10/21 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*12/10/21 15:20*	*12/10/21 23:54*	*1*
o-Terphenyl	*98*		*70 - 130*	*12/10/21 15:20*	*12/10/21 23:54*	*1*

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Client Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Client Sample ID: SS04
Date Collected: 12/07/21 09:42
Date Received: 12/09/21 09:39
Sample Depth: 0.5

Lab Sample ID: 880-9168-4
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	77.1		5.00		mg/Kg			12/14/21 10:29	1

Surrogate Summary

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

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)
880-9151-A-1-C MS	Matrix Spike	98	63 S1-
880-9151-A-1-D MSD	Matrix Spike Duplicate	118	96
880-9168-1	SS01	118	91
880-9168-2	SS02	101	86
880-9168-3	SS03	113	95
880-9168-4	SS04	125	90
LCS 880-14352/1-A	Lab Control Sample	109	96
LCSD 880-14352/2-A	Lab Control Sample Dup	107	95
MB 880-14352/5-A	Method Blank	122	101

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)
880-9168-1	SS01	92	92
880-9168-1 MS	SS01	90	83
880-9168-1 MSD	SS01	92	70
880-9168-2	SS02	65 S1-	98
880-9168-3	SS03	88	86
880-9168-4	SS04	96	98

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

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	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-14526/2-A	Lab Control Sample	98	109
LCSD 880-14526/3-A	Lab Control Sample Dup	115	112
MB 880-14526/1-A	Method Blank	104	117

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-14352/5-A
Matrix: Solid
Analysis Batch: 14356

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 14352

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:05	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:05	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:05	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		12/09/21 10:15	12/09/21 14:05	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/09/21 10:15	12/09/21 14:05	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/09/21 10:15	12/09/21 14:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*12/09/21 10:15*	*12/09/21 14:05*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*12/09/21 10:15*	*12/09/21 14:05*	*1*

Lab Sample ID: LCS 880-14352/1-A
Matrix: Solid
Analysis Batch: 14356

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14352

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09391		mg/Kg		94	70 - 130
Toluene	0.100	0.1001		mg/Kg		100	70 - 130
Ethylbenzene	0.100	0.1033		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	0.200	0.2028		mg/Kg		101	70 - 130
o-Xylene	0.100	0.09703		mg/Kg		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-14352/2-A
Matrix: Solid
Analysis Batch: 14356

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 14352

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09215		mg/Kg		92	70 - 130	2	35
Toluene	0.100	0.09617		mg/Kg		96	70 - 130	4	35
Ethylbenzene	0.100	0.09594		mg/Kg		96	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.1903		mg/Kg		95	70 - 130	6	35
o-Xylene	0.100	0.09404		mg/Kg		94	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-9151-A-1-C MS
Matrix: Solid
Analysis Batch: 14356

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 14352

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00202	U F1	0.101	0.05745	F1	mg/Kg		57	70 - 130
Toluene	<0.00202	U F1 F2	0.101	0.05205	F1	mg/Kg		52	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

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

Lab Sample ID: 880-9151-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 14356 — **Prep Batch: 14352**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00202	U F1	0.101	0.06151	F1	mg/Kg		61	70 - 130
m-Xylene & p-Xylene	<0.00403	U F1	0.202	0.1252	F1	mg/Kg		62	70 - 130
o-Xylene	<0.00202	U F1	0.101	0.06914	F1	mg/Kg		69	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*63*	*S1-*	*70 - 130*

Lab Sample ID: 880-9151-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 14356 — **Prep Batch: 14352**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0998	0.07782		mg/Kg		78	70 - 130	30	35
Toluene	<0.00202	U F1 F2	0.0998	0.07605	F2	mg/Kg		76	70 - 130	37	35
Ethylbenzene	<0.00202	U F1	0.0998	0.07871		mg/Kg		79	70 - 130	25	35
m-Xylene & p-Xylene	<0.00403	U F1	0.200	0.1559		mg/Kg		78	70 - 130	22	35
o-Xylene	<0.00202	U F1	0.0998	0.08168		mg/Kg		82	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

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

Lab Sample ID: MB 880-14526/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 14439 — **Prep Batch: 14526**

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		12/10/21 15:20	12/10/21 21:07	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/10/21 15:20	12/10/21 21:07	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/10/21 15:20	12/10/21 21:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*104*		*70 - 130*	*12/10/21 15:20*	*12/10/21 21:07*	*1*
o-Terphenyl	*117*		*70 - 130*	*12/10/21 15:20*	*12/10/21 21:07*	*1*

Lab Sample ID: LCS 880-14526/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 14439 — **Prep Batch: 14526**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	839.8		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	1000	971.0		mg/Kg		97	70 - 130

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QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

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

Lab Sample ID: LCS 880-14526/2-A
Matrix: Solid
Analysis Batch: 14439

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14526

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	98		70 - 130
o-Terphenyl	109		70 - 130

Lab Sample ID: LCSD 880-14526/3-A
Matrix: Solid
Analysis Batch: 14439

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 14526

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	888.4		mg/Kg		89	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	949.8		mg/Kg		95	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	115		70 - 130
o-Terphenyl	112		70 - 130

Lab Sample ID: 880-9168-1 MS
Matrix: Solid
Analysis Batch: 14439

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 14526

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	997	1194		mg/Kg		120	70 - 130
Diesel Range Organics (Over C10-C28)	271	F1	997	1617	F1	mg/Kg		135	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	83		70 - 130

Lab Sample ID: 880-9168-1 MSD
Matrix: Solid
Analysis Batch: 14439

Client Sample ID: SS01
Prep Type: Total/NA
Prep Batch: 14526

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	999	1251		mg/Kg		125	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	271	F1	999	1499		mg/Kg		123	70 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	70		70 - 130

QC Sample Results

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-14498/1-A
Matrix: Solid
Analysis Batch: 14772

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			12/14/21 08:56	1

Lab Sample ID: LCS 880-14498/2-A
Matrix: Solid
Analysis Batch: 14772

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	250.7		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-14498/3-A
Matrix: Solid
Analysis Batch: 14772

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	254.6		mg/Kg		102	90 - 110	2	20

Lab Sample ID: 880-9166-A-2-C MS
Matrix: Solid
Analysis Batch: 14772

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	102	F1	248	387.7	F1	mg/Kg		115	90 - 110		

Lab Sample ID: 880-9166-A-2-D MSD
Matrix: Solid
Analysis Batch: 14772

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	102	F1	248	375.5		mg/Kg		110	90 - 110	3	20

QC Association Summary

Client: WSP USA Inc. Job ID: 880-9168-1
Project/Site: Broadcaster 29 Federal 0003H SDG: 32.282, -103.49

GC VOA

Prep Batch: 14352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Total/NA	Solid	5035	
880-9168-2	SS02	Total/NA	Solid	5035	
880-9168-3	SS03	Total/NA	Solid	5035	
880-9168-4	SS04	Total/NA	Solid	5035	
MB 880-14352/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-14352/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-14352/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9151-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-9151-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 14356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Total/NA	Solid	8021B	14352
880-9168-2	SS02	Total/NA	Solid	8021B	14352
880-9168-3	SS03	Total/NA	Solid	8021B	14352
880-9168-4	SS04	Total/NA	Solid	8021B	14352
MB 880-14352/5-A	Method Blank	Total/NA	Solid	8021B	14352
LCS 880-14352/1-A	Lab Control Sample	Total/NA	Solid	8021B	14352
LCSD 880-14352/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	14352
880-9151-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	14352
880-9151-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	14352

Analysis Batch: 14508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Total/NA	Solid	Total BTEX	
880-9168-2	SS02	Total/NA	Solid	Total BTEX	
880-9168-3	SS03	Total/NA	Solid	Total BTEX	
880-9168-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 14439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Total/NA	Solid	8015B NM	14526
880-9168-2	SS02	Total/NA	Solid	8015B NM	14526
880-9168-3	SS03	Total/NA	Solid	8015B NM	14526
880-9168-4	SS04	Total/NA	Solid	8015B NM	14526
MB 880-14526/1-A	Method Blank	Total/NA	Solid	8015B NM	14526
LCS 880-14526/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	14526
LCSD 880-14526/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	14526
880-9168-1 MS	SS01	Total/NA	Solid	8015B NM	14526
880-9168-1 MSD	SS01	Total/NA	Solid	8015B NM	14526

Prep Batch: 14526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Total/NA	Solid	8015NM Prep	
880-9168-2	SS02	Total/NA	Solid	8015NM Prep	
880-9168-3	SS03	Total/NA	Solid	8015NM Prep	
880-9168-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-14526/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-14526/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: WSP USA Inc. Job ID: 880-9168-1
Project/Site: Broadcaster 29 Federal 0003H SDG: 32.282, -103.49

GC Semi VOA (Continued)

Prep Batch: 14526 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-14526/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9168-1 MS	SS01	Total/NA	Solid	8015NM Prep	
880-9168-1 MSD	SS01	Total/NA	Solid	8015NM Prep	

Analysis Batch: 14652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Total/NA	Solid	8015 NM	
880-9168-2	SS02	Total/NA	Solid	8015 NM	
880-9168-3	SS03	Total/NA	Solid	8015 NM	
880-9168-4	SS04	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 14498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Soluble	Solid	DI Leach	
880-9168-2	SS02	Soluble	Solid	DI Leach	
880-9168-3	SS03	Soluble	Solid	DI Leach	
880-9168-4	SS04	Soluble	Solid	DI Leach	
MB 880-14498/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-14498/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-14498/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9166-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-9166-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 14772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9168-1	SS01	Soluble	Solid	300.0	14498
880-9168-2	SS02	Soluble	Solid	300.0	14498
880-9168-3	SS03	Soluble	Solid	300.0	14498
880-9168-4	SS04	Soluble	Solid	300.0	14498
MB 880-14498/1-A	Method Blank	Soluble	Solid	300.0	14498
LCS 880-14498/2-A	Lab Control Sample	Soluble	Solid	300.0	14498
LCSD 880-14498/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	14498
880-9166-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	14498
880-9166-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	14498

Lab Chronicle

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Client Sample ID: SS01

Lab Sample ID: 880-9168-1
Matrix: Solid
Date Collected: 12/07/21 09:33
Date Received: 12/09/21 09:39

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	14352	12/09/21 10:15	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14356	12/09/21 14:55	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			14508	12/10/21 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/13/21 12:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	14526	12/10/21 15:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14439	12/10/21 22:10	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	14498	12/10/21 12:22	CH	XEN MID
Soluble	Analysis	300.0		1			14772	12/14/21 09:56	CH	XEN MID

Client Sample ID: SS02

Lab Sample ID: 880-9168-2
Matrix: Solid
Date Collected: 12/07/21 10:40
Date Received: 12/09/21 09:39

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	14352	12/09/21 10:15	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14356	12/09/21 15:15	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			14508	12/10/21 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/13/21 12:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	14526	12/10/21 15:20	DM	XEN MID
Total/NA	Analysis	8015B NM		5			14439	12/10/21 23:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	14498	12/10/21 12:22	CH	XEN MID
Soluble	Analysis	300.0		1			14772	12/14/21 10:16	CH	XEN MID

Client Sample ID: SS03

Lab Sample ID: 880-9168-3
Matrix: Solid
Date Collected: 12/07/21 09:40
Date Received: 12/09/21 09:39

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	14352	12/09/21 10:15	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14356	12/09/21 15:36	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			14508	12/10/21 14:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			14652	12/13/21 12:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	14526	12/10/21 15:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14439	12/10/21 23:33	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	14498	12/10/21 12:22	CH	XEN MID
Soluble	Analysis	300.0		1			14772	12/14/21 10:23	CH	XEN MID

Client Sample ID: SS04

Lab Sample ID: 880-9168-4
Matrix: Solid
Date Collected: 12/07/21 09:42
Date Received: 12/09/21 09:39

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	14352	12/09/21 10:15	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	14356	12/09/21 19:29	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			14508	12/10/21 14:15	AJ	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: WSP USA Inc. Job ID: 880-9168-1
Project/Site: Broadcaster 29 Federal 0003H SDG: 32.282, -103.49

Client Sample ID: SS04 Lab Sample ID: 880-9168-4

Date Collected: 12/07/21 09:42 **Matrix: Solid**
Date Received: 12/09/21 09:39

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			14652	12/13/21 12:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	14526	12/10/21 15:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			14439	12/10/21 23:54	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	14498	12/10/21 12:22	CH	XEN MID
Soluble	Analysis	300.0		1			14772	12/14/21 10:29	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: WSP USA Inc. Job ID: 880-9168-1
Project/Site: Broadcaster 29 Federal 0003H SDG: 32.282, -103.49

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

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

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

Method Summary

Client: WSP USA Inc. Job ID: 880-9168-1
Project/Site: Broadcaster 29 Federal 0003H SDG: 32.282, -103.49

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

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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:

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

Sample Summary

Client: WSP USA Inc.
Project/Site: Broadcaster 29 Federal 0003H

Job ID: 880-9168-1
SDG: 32.282, -103.49

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-9168-1	SS01	Solid	12/07/21 09:33	12/09/21 09:39	0.5
880-9168-2	SS02	Solid	12/07/21 10:40	12/09/21 09:39	0.5
880-9168-3	SS03	Solid	12/07/21 09:40	12/09/21 09:39	0.5
880-9168-4	SS04	Solid	12/07/21 09:42	12/09/21 09:39	0.5

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Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800

880-9168 Chain of Custody

12/14/2021

www.xenco.com Page 1 of 1

Project Manager	Kalei Jennings	Bill to (if different)	Kalei Jennings
Company Name	WSP USA	Company Name	WSP USA
Address	3300 North A Street	Address	3300 North A Street
City State ZIP	Midland, TX 79705	City State ZIP	Midland, TX 79705
Phone	817-683-2503 Email		Kalei.Jennings@wsp.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐
State of Project
Reporting Level I ☐ Level ☐ PST/US ☐ TRR ☐ Level V ☑
Deliverables EDD ☒ ADaPT ☐ Other

Project Name	Broadcaster 29 Federal 0003H	Turn Around	
Project Number	314037 20.000 20.02	Routine	☒
Project Location	32 282, -103 49	Rush	☐
Sampler's Name	Hadlie Green	Due Date	5 DAY TAT
PO #			

SAMPLE RECEIPT			
Temp Blank	Yes (No)	Wet Ice	(Yes) No
Temperature (°C)	4.1/4.2	Thermometer ID	IR2
Received Intact	(Yes) No		
Cooler Custody Seals	Yes No (N/A)	Correction Factor	1.0
Sample Custody Seals	Yes No (N/A)	Total Containers	

Preservative Codes

HNO3 HN
H2S04 H2
HCL HL
None NO
NaOH Na
MeOH Me
Zn Acetate+ NaOH Zn

TAT starts the day recevied by the lab if received by 4 30pm

Sample Comments

402

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	BTEX	TPH	CHLORIDES
SS01	SL	12/7/2021	9 33	0 5		X	X	X
SS02	SL	12/7/2021	10 40	0 5		X	X	X
SS03	SL	12/7/2021	9 40	0 5		X	X	X
SS04	SL	12/7/2021	9 42	0 5		X	X	X

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 Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** Hg

Notice Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors It assigns standard terms and conditions of service. 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 Xenco A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed These terms will be enforced unless previously negotiated.

	Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
1			12/9/21 9:39	2		
3				4		
5				6		

Revised Date101419 Rev 2019 1

Received by OCD: 7/25/2022 12:52:28 PM

Released to Imaging: 7/27/2022 10:14:02 AM

Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 880-9168-1
SDG Number: 32.282, -103.49

Login Number: 9168
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Xenco, Midland

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

ENSOLUM

APPENDIX D

NMOCD Notifications

From: Nobui, Jennifer, EMNRD
To: Kalei Jennings
Cc: Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Harimon, Jocelyn, EMNRD
Subject: FW: [EXTERNAL] Sampling Notification (Week of 06/13/22-06/17/22)
Date: Wednesday, June 8, 2022 5:31:39 PM
Attachments: image001.png
image002.png
image003.png
image004.png

[**EXTERNAL EMAIL**]

Kalei

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.

Thanks,
Jennifer Nobui

From: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Sent: Wednesday, June 8, 2022 4:21 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Harimon, Jocelyn, EMNRD <Jocelyn.Harimon@state.nm.us>
Subject: Fw: [EXTERNAL] Sampling Notification (Week of 06/13/22-06/17/22)

From: Kalei Jennings <kjennings@ensolum.com>
Sent: Wednesday, June 8, 2022 4:11 PM
To: Enviro, OCD, EMNRD <OCD.Enviro@state.nm.us>
Subject: [EXTERNAL] Sampling Notification (Week of 06/13/22-06/17/22)

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

All,

COP plans to complete final sampling activities at the following sites the week of June 13, 2022.

Monday

- Columbus Fed 021 & 022H CTB / NAPP2203830124

Tuesday

- Battle Axe Federal Com 002H / NAPP2134740531
- Broadcaster 29 Federal 3H / NAPP2201938653 & NAPP2132773092

- Super Cobra State Com #001H / NAPP2211531225
- Raspberry State Com 001H / NAPP2213029810

Wednesday

- Raspberry State Com 001H / NAPP2213029810
- Jaguar 18 State Com 002H & 003H / NAPP2213643210
-

Thursday

Friday

Thank you,

Kalei Jennings
Senior Scientist
817-683-2503
Ensolum, LLC

From: Beauvais, Charles R
To: Kalei Jennings
Subject: FW: [EXTERNAL](Extension Approval) Broadcaster 29 Federal 003H (Incident Number NAPP2132773092)
Date: Tuesday, April 26, 2022 9:40:39 AM
Attachments: image002.jpg
image003.png

[**EXTERNAL EMAIL**]

FYI

From: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Sent: Tuesday, April 26, 2022 7:45 AM
To: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Nobui, Jennifer, EMNRD <Jennifer.Nobui@state.nm.us>
Subject: [EXTERNAL](Extension Approval) Broadcaster 29 Federal 003H (Incident Number NAPP2132773092)

CAUTION:This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

RE: Incident #**NAPP2132773092**

Charles,

Your request for an extension to **July 24th, 2022** is approved. Please include this e-mail correspondence in the remediation and/or closure report.

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Beauvais, Charles R <Charles.R.Beauvais@conocophillips.com>
Sent: Monday, April 25, 2022 5:34 PM

To: EMNRD-OCD-District1spills <EMNRD-OCD-District1spills@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Esparza, Brittany <Brittany.Esparza@conocophillips.com>
Cc: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Subject: [EXTERNAL] Extension Request- Broadcaster 29 Federal 003H (Incident Number NAPP2132773092)

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

To Whom It May Concern,

COP is requesting an extension of the current April 24, 2022 deadline for submitting a remediation work plan or closure report required in 19.15.29.12.B.(1) NMAC for the Broadcaster 29 Federal 003H (Incident Number NAPP2132773092). The release was discovered on October 26, 2021. There was a second release event on January 4, 2022 (Incident Number NAPP2201938653). Remediation activities are ongoing. In addition, COP intends to drill a depth to water boring to confirm the closure criteria at the Site. The two release events will be addressed simultaneously. In order to complete remediation activities, allow time to drill the depth to water boring, and submit a remediation work plan or closure report, COP request an extension of the deadline until July 24, 2022.

Respectfully,

Charles R. Beauvais **II**
Senior Environmental Engineer **|** Environmental Operations **| ConocoPhillips**
(M) 575-988-2043
Charles.R.Beauvais@conocophillips.com

Our work is never so urgent or important that we cannot take the time to do it safely and in an environmentally responsible manner.

ENSOLUM

APPENDIX E

Final C-141

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAPP2132773092
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2132773092
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 11/29/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 63506

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 63506
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	11/29/2021

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2132773092
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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2132773092
District RP	
Facility ID	
Application ID	

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Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 07/25/2022

email: Charles.R.Beauvais@conocophillips.com Telephone: 575-988-2043

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2132773092
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

☐ Extents of contamination must be fully delineated.

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

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Printed Name: Charles Beauvais
Title: Senior Environmental Engineer
Signature: Charles R. Beauvais II
Date: 07/25/2022
email: Charles.R.Beauvais@conocophillips.com
Telephone: 575-988-2043

OCD Only

Received by: _____ Date: _____

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

Signature: Jennifer Nobui
Date: 07/27/2022

Received by OCD: 1/19/2022 10:51:59 AM
Released to Imaging: 7/27/2022 10:14:02 AM

District I
1625 N. French Dr., Hobbs, NM 88240
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District III
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District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	NAPP2201938653
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Kelsy Waggaman	Contact Telephone	(432) 688-9057
Contact email	Kelsy.Waggaman@ConocoPhillips.com	Incident # *(assigned by OCD)*	NAPP2201938653
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.28158 Longitude -103.49006

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Broadcaster 29 Federal 003H	Site Type	Tank Battery
Date Release Discovered	January 4, 2022	API# *(if applicable)*	

Unit Letter	Section	Township	Range	County
B	29	23S	34E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* Limestone Basin Prop Ranch, LLC)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.2	Volume Recovered (bbls) 0
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a oil to flare event.
No fluid was recovered due to the fire burning off and standing fluid. The release resulted in a flare fire on and off pad.

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State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release involved a fire.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notice was given by Kelsy Waggaman via e-mail January 5, 2022 at 6:00 pm to BLM_NM_CFO_Spill@blm.gov and ocd.enviro@state.nm.us.

Initial Response

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

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

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

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

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Printed Name: Brittany N. Esparza Title: Environmental Technician

Signature: Brittany Esparza Date: 1/19/2022

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

OCD Only

Received by: Ramona Marcus Date: 1/19/2022

Received by OCD: 7/25/2022 12:52:28 PM
Page 98 of 104
Released to Imaging: 1/19/2022 8:16:48 PM

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L48 Spill Volume Estimate Form

Facility Name & Number:	BROADCASTER 29 FED 3H BATTERY / LEASE #NM092199 / API #30-025-41909
Asset Area:	NDBE
Release Discovery Date & Time:	1-4-2021 @ 10:28AM
Release Type:	Oil
Provide any known details about the event:	Found that the regulator that supplies the pneumatic oil dump froze. This did not allow supply gas to enter the dump causing the dump to be inoperable. A few months back we made modifications to the battery. Some of the modifications included adding high liquid level kills to each ko and heater. During this upset condition we failed to receive an alarm, notifying us that

NAPP2201938653

Spill Calculation - Subsurface Spill - Rectangle

Was the release on pad or off-pad?	See reference table below
Has it rained at least a half inch in the last 24 hours?	See reference table below

Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	80.0	40.0	0.03	15.16%	1.486	0.225			
Rectangle B					0.000	0.000			
Rectangle C					0.000	0.000			
Rectangle D					0.000	0.000			
Rectangle E					0.000	0.000			
Rectangle F					0.000	0.000			
Rectangle G					0.000	0.000			
Rectangle H					0.000	0.000			
Rectangle I					0.000	0.000			
Rectangle J					0.000	0.000			
					Total Volume Release:	0.225			

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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 73462
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rmarcus	None	1/19/2022

Received by OCD: 7/25/2022 12:52:28 PM
Released to Imaging: 1/19/2022 8:16:48 PM

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201938653
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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?	>100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201938653
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Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 07/25/2022

email: Charles.R.Beauvais@conocophillips.com Telephone: 575-988-2043

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2201938653
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Remediation Plan

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Printed Name: Charles Beauvais Title: Senior Environmental Engineer

Signature: Charles R. Beauvais II Date: 07/25/2022

email: Charles.R.Beauvais@conocophillips.com Telephone: 575-988-2043

OCD Only

Received by: _____ Date: _____

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

Signature: Jennifer Nobui Date: 07/27/2022

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

CONDITIONS

Action 128451

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 128451
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jnobui	Remediation Plan Approved.	7/27/2022