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	nAPP2110325623
District RP	
Facility ID	
Application ID	

### **Release Notification**

### **Responsible Party**

Responsible Party Marathon Oil Permian LLC	OGRID 372098
Contact Name Melodie Sanjari	Contact Telephone 575-988-8753
Contact email msanjari@marathonoil.com	Incident # (assigned by OCD)
Contact mailing address 4111 S. Tidwell Rd., Carlsbad, NM 8220	

### **Location of Release Source**

atitude 32.5	664078		Longitude		-103.7428894	
Zatitude <u>52.5</u>	004978			decimal de	egrees to 5 decimal places)	
Site Name: Q	UEENIE 15	FEDERAL #001	lH		Site Type: Oil & Gas	Facility
Date Release	Discovered	: 4/12/2021			API# (if applicable) 30-02	25-40230
TT ': T		T 1:	D			
Unit Letter	Section	Township	Range		County	
M	14	20S	32E	Lea		
Surface Owne	r: State	☐ Federal ☐ T	ribal Private	(Name:		)
			Nature ar	ıd Vo	lume of Release	

Crude Oil	rial(s) Released (Select all that apply and attach calculations or speci Volume Released (bbls)	Volume Recovered (bbls)
Produced Water	Volume Released (bbls) 57	Volume Recovered (bbls) 50
	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)
	on resulted in a produced water tank overflow into the ey recovered and the removal of impacted gravel within	earthen containment. The source was isolated, all standing the containment has been scheduled.

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Was this a major	If YES, for what reason(s) does the responsi	ble party consider this a major release?
release as defined by	Volume	
19.15.29.7(A) NMAC?		
⊠ Yes □ No		
		n? When and by what means (phone, email, etc)?
Yes – NOR was submitted	d first thing 4/12/2021	
	Initial Res	ponse
The responsible p	party must undertake the following actions immediately u	nless they could create a safety hazard that would result in injury
The source of the rele	ease has been stopped.	
The impacted area ha	s been secured to protect human health and th	e environment.
Released materials ha	ive been contained via the use of berms or dik	es, absorbent pads, or other containment devices.
	ecoverable materials have been removed and r	
<u> </u>		
If all the actions described	d above have <u>not</u> been undertaken, explain wh	y:
D 10 17 20 0 D (4) ND	11	
has begun, please attach	a narrative of actions to date. If remedial eff	dediation immediately after discovery of a release. If remediation forts have been successfully completed or if the release occurred ase attach all information needed for closure evaluation.
		st of my knowledge and understand that pursuant to OCD rules and
, ,	•	ations and perform corrective actions for releases which may endanger
failed to adequately investigate	nent. The acceptance of a C-141 report by the OC ate and remediate contamination that nose a threat	O does not relieve the operator of liability should their operations have to groundwater, surface water, human health or the environment. In
		ponsibility for compliance with any other federal, state, or local laws
and/or regulations.		
Printed Name: Mel	odie Saniari	Title: Environmental Professional
1 Timed Ivameivier	odie Sanjan	Livironmental i fotessional
Signature: Melod	lie Saniari	Date: 4/13/2021
email: msanjari@marat	thonoil com	Telephone: <u>575-988-8753</u>
OCD Only		
<u>oco omy</u>		
Received by:	1	Date:

### **Spill Calculation Tool**



tanding Liquid Inputs:							
			Avg. Liquid		<b>Total Volume</b>	Water Volume	Oil Volume
_	Length (ft.)	Width (ft.)	Depth (in.)	% Oil	(bbls)	(bbls)	(bbls)
Rectangle Area #1					0.00	0.00	0.00
Rectangle Area #2					0.00	0.00	0.00
Rectangle Area #3					0.00	0.00	0.00
Rectangle Area #4					0.00	0.00	0.00
Rectangle Area #5					0.00	0.00	0.00
Rectangle Area #6					0.00	0.00	0.00
Tank Displacement					0.00	0.00	0.00
Tank Displacement					0.00	0.00	0.00
_				Liquid Volume:	0.00	0.00	0.00
	Length (ft.)	Width (ft.)	Avg. Saturated Depth (in.)	% Oil	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
Rectangle Area #1	Length (ft.)	Wiath (π.)	1.25	% OII	7.01	7.01	0.00
Rectangle Area #2	90	30	1.25	0%	0.00	0.00	0.00
Rectangle Area #3				0%	0.00	0.00	0.00
Rectangle Area #4				0%	0.00	0.00	0.00
Rectangle Area #5				0%	0.00	0.00	0.00
Rectangle Area #6				0%	0.00	0.00	0.00
Rectangle Area #7				070	0.00	0.00	0.00
Rectangle Area #8					0.00	0.00	0.00
nectangle / nea no				Saturated Volume	7.01	7.01	0.00
<u>Volume F</u>	Recovered and no	t included in Stand	<u>ling Liquid Inputs :</u>	% Oil	Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
					50.00		
					Total Volume (bbls)	Water Volume (bbls)	Oil Volume (bbls)
			Total Sn	ill Volume (bbls):	57.01	7.01	0.00

		NV 98221	- 5	T.
	1000	49-5634 • uws1999@gmail.com		E
	Date 04-12-21	No.	90165	-
	Company MAZATHON			
		E 15 FEDERAL 1H		
	Disposal/Ticket # 15.6 EDDY	4052.	- 1970	
	Water Station	Ticket #		
	Top Gage	Bottom Gage		
	Truck No			
	START TIME 4:00 PM	TOTAL ON TOTAL		
量额回路经	□ Fresh water	Barrels		
1-1	☐ Brine water	Barrels		
	Produced water	50 Barrels		
	□ Other	Barrels	1	
	□ KCL	Barrels		
	Job Description			
	COLLECTION	SPILLED PRODUCTED	4	
	WATER S			
	Time leaving yard	□ AM □ PM		
	Time arriving location	□АМ□РМ		
	Time leaving location	□ AM □ PM		
	Time arriving disposal/water st.	O AM O PM		
	Time leaving disposal/water st.	O AM O PM		
	Time arriving yard	O AM O PM		
The second secon	Driver Name CNGS S	AATHLAN		
	Cilver Hairie			

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### **Site Assessment/Characterization**

 $This information \ must \ be \ provided \ to \ the \ appropriate \ district \ of fice \ no \ later \ than \ 90 \ days \ after \ the \ release \ discovery \ date.$ 

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 <b>not</b> 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 ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil
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 well Field data	ls.
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	
<ul> <li>✓ Photographs including date and GIS information</li> <li>✓ Topographic/Aerial maps</li> </ul>	
☐ 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.

Received by OCD: 6/8/2021 1:41:13 PM Form C-141 State of New Mexico Page 4 Oil Conservation Division

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Application ID		

I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the failed to adequately investigate and remediate contamination that pose a thr addition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	occuping of the contractive actions for releases which may endanger occuping occupancy occuping
Printed Name: Melodie Sanjari	Title: Environmental Professional
Signature: Melodie Sanjari	Date: 6/8/2021
email: msanjari@marathonoil.com	Telephone: <u>575-988-8753</u>
OCD Only	
Received by:	Date:

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State of New Mexico

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### **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be	e included in the plan.
<ul> <li>□ Detailed description of proposed remediation technique</li> <li>□ Scaled sitemap with GPS coordinates showing delineation point</li> <li>□ Estimated volume of material to be remediated</li> <li>□ Closure criteria is to Table 1 specifications subject to 19.15.29.1</li> <li>□ Proposed schedule for remediation (note if remediation plan times)</li> </ul>	2(C)(4) NMAC
Deferral Requests Only: Each of the following items must be con	firmed as part of any request for deferral of remediation.
Contamination must be in areas immediately under or around predeconstruction.	roduction equipment where remediation could cause a major facility
Extents of contamination must be fully delineated.	
Contamination does not cause an imminent risk to human health	n, the environment, or groundwater.
	e and remediate contamination that pose a threat to groundwater, acceptance of a C-141 report does not relieve the operator of
Printed Name: Melodie Sanjari	Title: Environmental Professional
Signature: Melodie Sanjari	Date: _6/8/2021
email: msanjari@marathonoil.com	Telephone: 575-988-8753
OCD Only	
Received by: Chad Hensley	Date:08/10/2021
Approved	Approval
Signature: Chad Hend	Date: 08/10/2021

wsp

WSP USA

508 West Stevens Street Carlsbad, NM 88220 575.887.0101

June 8, 2021

District II New Mexico Oil Conservation Division 811 South First Street Artesia, New Mexico 88210

RE: Deferral Request
Queenie 15 Federal #001H
Incident Number nAPP2110325623
Eddy County, New Mexico

To Whom it May Concern:

WSP USA Inc. (WSP), on behalf of Marathon Oil Permian, LLC. (Marathon), presents the following Deferral Request detailing site assessment and soil sampling activities at the Queenie 15 Federal #001H (Site) in Unit M, Section 14, Township 20 South, Range 32 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacts to soil resulting from a release of produced water within earthen containment at the Site. Based on field observations, field screening activities, and laboratory analytical results from soil sampling activities, Marathon is submitting this Deferral Request describing site assessment and delineation activities that have occurred and requesting deferral of final remediation for Incident Number nAPP2110325623 until the equipment in the affected area is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.

### **RELEASE BACKGROUND**

On April 12, 2021, TMS¹ miscommunication resulted in the release of 57 barrels (bbls) of produced water into the tank battery earthen containment. The source of the release was immediately isolated. Approximately 50 bbls of produced water were recovered via hydrovac. Marathon reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on April 13, 2021 and was assigned Incident Number nAPP2110325623. Following the subsequent notification to the NMOCD and recovery of the release, Marathon removed saturated pea gravel within the earthen containment to the maximum extent practicable (MEP) without compromising the existing storage tanks and associated flow pipes and equipment.

<sup>&</sup>lt;sup>1</sup> Scheduling management system software utilized to control the transport of fluids from tank batteries to appropriate endpoint location.



### SITE CHARACTERIZATION

WSP characterized the Site 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) through a desktop search of potential sensitive receptors as well as referencing an NMOCD approved site characterization of the Site that was associated with Incident Number NDHR1921342505. The Deferral Request Report dated October 18, 2019, and characterization associated with Incident Number NDHR1921342505 was subsequently approved by NMOCD on September 17, 2020. Based on the uploaded NMOCD record and groundwater information referenced in the Eddy Lea Energy Alliance (ELEA) submission of the Final Detailed Siting Report (https://www.nrc.gov/docs/ML1024/ML102440738.pdf), depth to protectable groundwater is greater than 100 below ground surface (bgs). The ELEA report states shallow groundwater is found at approximately 35 feet bgs; however, the shallow groundwater quality exceeded 10,000 parts per million (PPM) Total Dissolved Solids (TDS), therefore the shallow groundwater in the vicinity of the Site is not considered protectable. Protectable groundwater has been observed between 300 to 400 feet bgs.

The closest continuously flowing or significant watercourse to the Site is an intermittent riverine, located approximately 3,707 feet east 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, and church. 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 located in a low-potential karst area. Potential receptors identified during Site Characterization are displayed in Figure 1.

### **CLOSURE CRITERIA**

Based on the results of the Site Characterization and approved NMOCD groundwater determination of the Site referenced in the 2019 Deferral Request Report, 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 AND DELINEATION SOIL SAMPLING ACTIVITIES

On April 20, 2021, WSP personnel visited the Site to conduct delineation activities and evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP reviewed and verified the Form C-141 incident description (release source and release location) with visual soil impacts and confirmed that the release remained within the tank battery earthen containment. A total of eight delineation boreholes (BH01 through BH08) were attempted utilizing a hand auger within and surrounding the release extent to assess for the presence or absence of impacted soil. During delineation activities, refusal was encountered at a competent, dense caliche stratum at approximately 0.5 feet to 1-foot bgs. Soil from the boreholes were field screened at approximately 0.5-foot intervals for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. For delineation boreholes (BH01 through BH08) one soil sample was collected from the soil interval with the highest field screening (0.5-foot bgs). For delineation boreholes (BH05, BH07 and BH08) one sample was collected from the terminus of the borehole soil sample (1-foot bgs). The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler initials, method of analysis, and immediately placed on ice. The soil samples were shipped 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 following EPA Method 8015M/D; and chloride following EPA Method 300.0. Field screening results and observations for each borehole were recorded on a lithologic/soil sampling log and are presented in Attachment 1. Photographic documentation from delineation activities is included in Attachment 2.

Based on the lithology observed at the Site, an alternative method of delineation appeared warranted to continue vertical soil sampling collection of second depth samples for boreholes BH01 through BH04 and BH06.

On May 13, 2021, WSP utilized a Shaw Tool, Ltd Portable Core Drill was utilized to further advance five delineation boreholes (BH01 through BH04, and BH06) to complete horizontal and vertical definition of impacted soil associated with the subject release. Due to the location of the release, a Hot Work Permit was necessary to conduct investigative motor or electric powered drilling methods within 35 feet of any hydrocarbon sources. In coordination with Marathon, a Marathon safety representative was retained to conduct air monitoring as part of the permit process for investigative core drilling activities. The boreholes were advanced to depths ranging from approximately 1-foot to 2 feet bgs. Soil from the boreholes was field screened, at minimum, every 1-foot interval for volatile aromatic hydrocarbons and chloride. Soil samples were collected, handled, and analyzed as previously described. Field screening results and observations for each borehole were recorded on lithologic/soil sampling logs which are included in Attachment 1. Photographic documentation from core drilling activities is included in Attachment 2.



### LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from borehole BH01 through BH04 indicated TPH-GRO/TPH-DRO and TPH concentrations exceeded the Closure Criteria in soil at approximately 0.5 feet bgs. Laboratory analytical results for delineation soil samples collected from borehole BH01 through BH04 collected at approximately 2 feet bgs indicated benzene, BTEX, TPH GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and confirms vertical delineation within the subject release area. Laboratory analytical results for delineation soil samples collected from boreholes BH05 through BH08 (all located outside of the secondary earthen containment area) at approximately 0.5 foot and 1-foot bgs indicated benzene, BTEX, TPH GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and confirm immediate horizontal definition. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 3.

### **DEFERRAL REQUEST**

Based on the data collected from the final delineation soil samples and further review of the receptors that affect the Closure Criteria at this Site, Marathon requests to leave shallow residual TPH-GRO/TPH-DRO, and TPH impacts in place within the earthen containment and continue remediation of the remaining impacted soil during any future major construction or final abandonment. Approximately 173 cubic yards of impacted soil remains in place at the Site, assuming a maximum depth of 2 feet bgs as determined by delineation samples (BH01 through BH04) collected within the release. The deferral is equally protective of public health and environment for the following reasons:

- Removal of shallow subsurface caliche within the earthen containment is not a practical
  or safe method of remediation due to the location of the release where further
  remediation would potentially cause a major facility deconstruction.
- The residual hydrocarbon concentrations are restricted to the upper portions of an indurated caliche. The lithologic properties of this rock suggest little pore space interconnectivity, fracturing, and/or voids. Based on the laboratory analytical data associated with BH01 through BH04, the residual hydrocarbon concentrations exist above 2 feet bgs only.
- TPH-impacted soil will be covered by new imported pea gravel, reducing potential exposure to wildlife and workers, while also allowing for natural attenuation through volatilization.

Due to the presence of an indurated caliche within the release footprint, safety restrictions prevent the ability to remove all impacted soil associated with TPH-GRO/TPH-DRO and TPH



exceedances. Any remaining TPH-GRO/TPH-DRO, and TPH concentrations identified within the vicinity of boreholes BH01 through BH04 (all located within secondary earthen containment) are equally protective of public health, environment, and protectable groundwater based on the depth of the identified hydrocarbon concentrations, limited pathway to any potential surface or subsurface receptors, and decreasing concentrations. As such, Marathon responsibly requests No Further Action associated with Incident Number nAPP2110325623 until the equipment in the affected area is removed during other operations, or when the well or facility is plugged or abandoned, whichever comes first.

If you have any questions or comments, please do not hesitate to contact Mr. Daniel R. Moir at (303) 887-2946.

Sincerely,

WSP USA Inc.

Fatima Smith

Associate Consultant, Geologist

Daniel R. Moir, P.G.

Lead Consultant, Geologist

cc: Melodie Sanjari, Marathon

**Bureau of Land Management** 

### Attachments:

Figure 1 Site Location Map

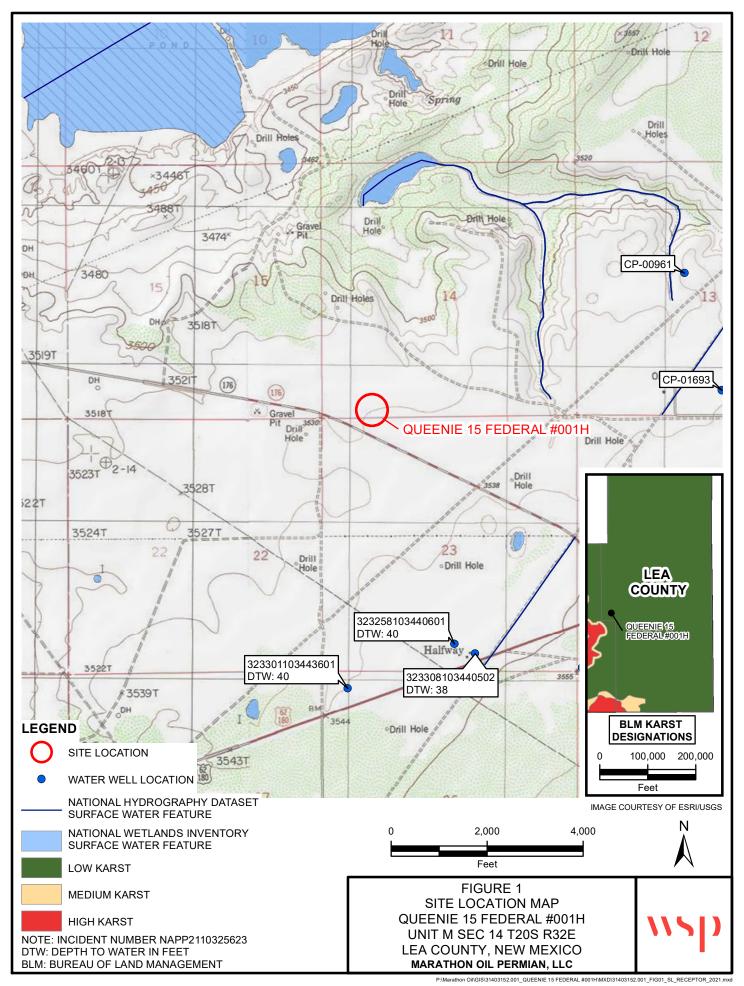
Figure 2 Delineation Soil Sample Locations

Table 1 Soil Analytical Results

Attachment 1 Lithologic/Sampling Log

Attachment 2 Photographic Log

Attachment 3 Laboratory Analytical Reports



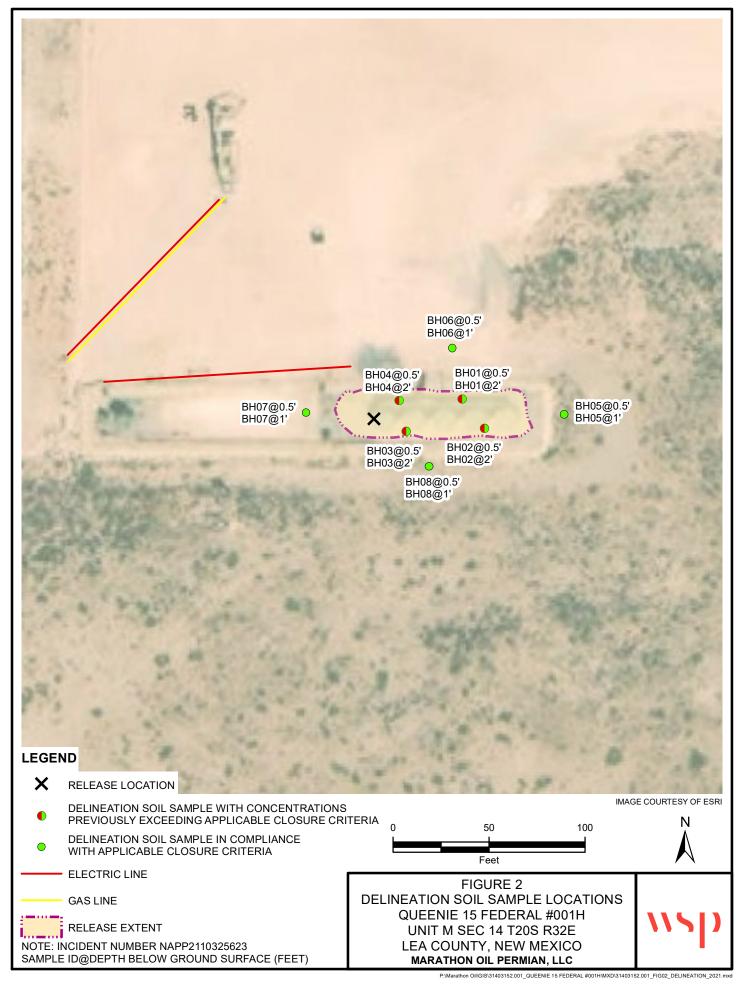


Table 1

### Soil Analytical Results Queenie 15 Federal #001H Incident Number NAPP2110325623 Marathon Oil Permian, LLC Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Clo	osure Criteria (NM	AC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
<b>Delineation Samples</b>										
BH01	04/20/2021	0.5	< 0.00200	0.0621	3,550	392	636	3,942	4,580	3,280
BH01	05/13/2021	2	< 0.00198	< 0.00396	240	<49.8	<49.8	240	240	1,400
BH02	04/20/2021	0.5	< 0.00202	0.00542	4,930	86.5	846	5,017	5,860	5,700
BH02	05/13/2021	2	< 0.00202	< 0.00403	245	<49.8	<49.8	245	245	4,740
BH03	04/20/2021	0.5	< 0.00200	0.140	4,070	551	817	4,621	5,440	1,980
BH03	05/13/2021	2	< 0.00202	< 0.00404	116	<49.9	<49.9	116	116	3,470
BH04	04/20/2021	0.5	0.00354	0.378	2,330	924	382	3,254	3,640	892
BH04	05/13/2021	2	< 0.00200	< 0.00399	428	<49.9	<49.9	428	428	7,160
BH05	04/20/2021	0.5	< 0.00202	0.0434	<49.9	<49.9	<49.9	<49.9	<49.9	18.8
BH05	04/20/2021	1	< 0.00198	< 0.00396	<49.8	<49.8	<49.8	<49.8	<49.8	23.0
BH06	04/20/2021	0.5	< 0.00200	< 0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	64.1
BH06	05/13/2021	1	< 0.00199	< 0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	39.3

Table 1

### Soil Analytical Results Queenie 15 Federal #001H Incident Number NAPP2110325623 Marathon Oil Permian, LLC Lea County, New Mexico

Sample ID	Sample Date	Sample Depth (ft bgs)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Clo	sure Criteria (NM	AC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
BH07	04/20/2021	0.5	< 0.00200	< 0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	356
BH07	04/20/2021	1	< 0.00199	< 0.00398	<50.0	<50.0	< 50.0	<50.0	< 50.0	8.80
BH08	04/20/2021	0.5	< 0.00198	< 0.00396	<50.0	< 50.0	<50.0	<50.0	<50.0	271
BH08	04/20/2021	1	< 0.00200	< 0.00400	<50.0	< 50.0	<50.0	<50.0	< 50.0	21.6

#### **Notes:**

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

ORO - oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

< - indicates result is less than the stated laboratory method practical quantitation limit

NE - Not Established

BOLD - indicates results exceed the higher of the background sample result or applicable regulatory standard

Greyed data represents samples that were excavated

•		1		WSP US	SA SA		BH or PH Name: BH01	Date: 04/20 - 05/13/2021
	51		5	08 West Steve	ns Street		Site Name: Queenie 15 Fede	ral #001H
			Car	Isbad, New Me	xico 8822	0	RP or Incident Number: nAPF	
							WSP Job Number: 31403152	
				SAMPLING			Logged By: FS, WM, JH	Method: Hand Auger and Core-Dril
at/Long: 32.	566066, -103	3.74250 <sup>2</sup>	1	Field Screening Hach chloride s			Hole Diameter: 2 inches	Total Depth: 2 feet bgs
omments: A	II chloride fie	ld scree	enings inclu	de a 40% correct	ion factor			
moist; D-dı	y; Y-yes; N-r	10		<del>                                     </del>				
Content	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(sb)			y/Remarks
M 2,47 M 2,13 M 1,32	9 83.7	Y Y Y Y	BH01 BH01	0.5	0   CCH 1   2	(	LICHE, dry, tan, moderat gravel (0.5 - 3mm), trace : dark brown staining, mode	e - well consolidation, some sand, poorly graded, moderate erate H/C odor
\ \		·			1	TD @ 1	2 feet bgs	
						10 @ /	2 1001 063	

	1:41:13 PM			BH or PH Name: BH02	Pag Date: 04/20 - 05/13/2021
<b>115D</b>		WSP USA			
	508	8 West Stevens S bad, New Mexico	treet	Site Name: Queenie 15 Federa	
	Carls	Dad, New Mexico	00220	RP or Incident Number: nAPP2	
LITUOLO	2010 / 2011	OAMBURIO I O	0	WSP Job Number: 31403152.0	
		SAMPLING LO	ف	Logged By: FS, WM, JH	Method: Hand Auger and Core-Drill
at/Long: 32.566024, -103.742		Field Screening: Hach chloride strips,	PID	Hole Diameter: 2 inches	Total Depth: 2 feet bgs
omments: All chloride field so -moist; D-dry; Y-yes; N-no					1
Content Chloride (ppm) Vapor (ppm) Staining		Sample Depth (ft bgs)	USCS/Rock Symbol		r/Remarks
M 10,819 73.0 Y M 1,761 16.5 N	BH02	0.5	CCHE 0-2		own, moderate - well consolidations sand, poorly graded, moderate e H/C odor
M   4,928   9.4   N	BH02	2 2			
			TD	@ 2 feet bgs	

<b>115D</b>			BH or PH Name: BH03	Date: 04/20 - 05/13/2021
	WSP USA			
	508 West Stevens Carlsbad, New Mexic	Street	Site Name: Queenie 15 Federa	
	Garisbau, INEW MEXIC	00220	RP or Incident Number: nAPP2 WSP Job Number: 31403152.	
LITHOLO	GIC / SOIL SAMPLING L	OG	Logged By: FS, WM, JH	
at/Long: 32.566020, -103.742		<u> </u>	Hole Diameter: 2 inches	Method: Hand Auger and Core-Drill  Total Depth: 2 feet bgs
	Hach chloride strip		TIOIC DIAMETER. 2 IIIOICS	Total Deptil. 2 leet bys
omments: All chloride field so -moist; D-dry; Y-yes; N-no	reenings include a 40% correction		•	•
Content Chloride (ppm) Vapor (ppm) Staining		USCS		ı/Remarks
M 1,450 744.7 Y M 1,836 25.0 N		S		own, moderate - well consolidations sand, poorly graded, moderate e H/C odor
M   1,125   8.8   N	BH03 2 2			
		ID @	2 feet bgs	

	1:41:13 PM		BH or PH Name: BH04	Pag  Date: 04/20 - 05/13/2021
<b>115D</b>	WSP USA			
	508 West Stevens St Carlsbad, New Mexico	treet 88220	Site Name: Queenie 15 Federa	
	Gansbau, New WextCO	00220	RP or Incident Number: nAPP: WSP Job Number: 31403152.	
I ITUO! O	GIC / SOIL SAMPLING LOC	3	Logged By: FS, WM, JH	
at/Long: 32.566065, -103.7426		<u> </u>	Hole Diameter: 2 inches	Method: Hand Auger and Core-Drill Total Depth: 2 feet bgs
	Hach chloride strips,		Diamotor. 2 mones	70tai 20pai. 2 100t 293
omments: All chloride field sci -moist; D-dry; Y-yes; N-no	eenings include a 40% correction fa	ctor		•
Content Chloride (ppm) Vapor (ppm)		USCS/Rock Symbol		//Remarks
M 1,663 561.2 Y M 1,956 3.8 N	BH04 0.5 T 1	son		own, moderate - well consolidati e sand, poorly graded, moderate e H/C odor
M   1,299   8.9   N	BH04 2 2 2			
		ID @ 2	feet bgs	

									BH or PH Name: BH05	Date: 04/20/2021	
	1					P USA					
		211		50	08 West S	Stevens S w Mexico	Street		Site Name: Queenie 15 Fed		
				Carls	spad, Ne	w iviexico	00220		RP or Incident Number: nAP		
		1.177.14	21.00	10 / 00"	CAND	INC			WSP Job Number: 3140315		10 = :
n+/1 - · ·	ng: 32.566			IC / SOIL	Field Scre		G		Logged By: FS, WM, JH Hole Diameter: 2 inches	Method: Hand Auger an Total Depth: 1-foot bgs	na Core-Drill
avLOľ	ıy. ა∠.500	1U3	.14232			ening: ride strips,	, PID		HOIE DIAMETER. 2 INCHES	Total Deptil. 1-100t bgs	
	ents: All c st; D-dry; \			enings include						•	
) <del> </del>	e (	L 0	Ð	#	Sample		ock ol				
Content	Chloride (ppm)	Vapor (ppm)	Staining	ldu	Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		Litholo	gy/Remarks	
D D	<156	0.2	N N	BH05	0.5	0	SP	graii	n, some caliche gravel	wn, poorly graded, fine-v (0.5-3mm), moderately c	ery fine consolidat
D	<156	0.7	N	BH05	1	1		no s D @ 1-fo	tain, no odor		
\									Ü		
	`										
		_									

				MC	DUCA			BH or PH Name: BH06	Date: 04/20 - 05/13/2021	
111					P USA	Diam t		Cita Nama Occasi 45.5	2721 #00411	
			5 Carl	08 West S sbad, Ne	stevens S w Mexico	Street 5 88220		Site Name: Queenie 15 Fed RP or Incident Number: nAF		
			Odil	2550, 110		03220		WSP Job Number: 3140315		
	LITU		IC / SOIL	SAMDI	INGLO	G				Core Dell
nt/Long: 20 E00				Field Scre				Logged By: FS, WM, JH	Method: Hand Auger and Total Depth: 1-foot bgs	Core-Drill
at/Long: 32.566	) 139, <b>-</b> 103	.14251	O	Hach chlo	-	. PID		Hole Diameter: 2 inches	Total Depth: 1-100t bgs	
omments: All c			enings includ							
			#	Comple		yoc -				
Content Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		Litholo	gy/Remarks	
D <156	1.5	N N	BH06	0.5	0		0-1' CAL no s	ICHE, dry, tan-off white	e, moderate - well consolid	lation
D <168	0.1	Ν	BH06	1	1					
						TI	D @ 1-fo	ot bgs		

Site Name: Queenie 19 Federal #001H  Site Name: Queenie 19 Federal #001H  RP or Incident Number: nAPP2110325623  WSP Job Number: 31403152.001  LiTHOLOGIC / SOIL SAMPLING LOG  Latifung: 32.569048, -103:742764   Field Screening: Include a 40% correction factor  Mindiat; D-dry; V-yes; N-or  D						we	DUCA			BH or PH Name: BH07	Date: 04/20/2021	
Carlsbad, New Mexico 88220  EITHOLOGIC / SOIL SAMPLING LOG  At/Long: 32.566048, -103.742764  Field Screening: Hach chloride strips, PID  Comments: All chloride field screenings include a 40% correction factor A-moist; D-dry; Y-yes; N-no  D								No. of		Cita Namas Occasión 45.5		
WSP Job Number: 31403152.001   Logged By: FS, WM, JH   Method: Hand Auger and Core-Drift   At/Long: 32.566048, -103.742764   Field Screening: Hach chloride strips, PID   Hach chloride field screenings include a 40% correction factor   Hole Diameter: 2 inches   Total Depth: 1-foot bgs   Hach chloride field screenings include a 40% correction factor   Hole Diameter: 2 inches   Total Depth: 1-foot bgs   Hach chloride field screenings include a 40% correction factor   Hole Diameter: 2 inches   Total Depth: 1-foot bgs   Hach chloride field screenings include a 40% correction factor   Hole Diameter: 2 inches   Total Depth: 1-foot bgs   Hach chloride strips, PID   Depth (fft bgs)   O					5 Car	uo vvest S sbad. Ne	stevens S w Mexico	88220				
LITHOLOGIC / SOIL SAMPLING LOG  at/Long: 32.566048, -103.742764  Field Screening: Hach chloride strips, PID  comments: All chloride field screenings include a 40% correction factor -moist; D-dry; Y-yes; N-no  Sample Depth (ft bgs)  Depth (ft bgs)  Depth (ft bgs)  Depth One Depth (ft bgs)  Depth One Depth					Odi	255,47		55220				
Field Screening: Hach chloride strips, PID  memorats: All chloride field screenings include a 40% correction factor moist; D-dry; Y-yes; N-no  Sample Depth (ft bgs)  Depth (ft bgs)  Depth Dept			LITU		IC / 90"	SAMDI	INGLO	G				rand Care Dell
Hach chloride strips, PID  omments: All chloride field screenings include a 40% correction factor -moist; D-dry; Y-yes; N-no  Total Company of the point of the p	n+/I ~	ng: 22 E60						9				
omments: All chloride field screenings include a 40% correction factor indictive indic	ıı, LUİ	ig. 32.300	,∪ <del>4</del> 0, -103	4210	7			, PID		TIOIE DIAMETEL. 2 ITICITES	10tal Deptil. 1-100t b	ng s
Example Depth (ft bgs)  Depth					enings includ	le a 40% c	orrection fa	actor			1	
D					#	Sample		- S				
D N BH07 0.5 GP 0-1' CALICHE GRAVEL, dry, tan-light brown, moderate - well consolidation, poorly graded, no stain, no odor	Conter	Chloric (ppm)	Vapol (ppm)	Stainin	Sample	Depth	Depin	USCS/R Symbo		Litholo	gy/Remarks	
	D			Ν								ate - well
TO W 1-100t bgs	<u>&gt;</u>	330	0.0	IN	BH07	1	ı	<u> </u>	D @ 1 f-			

11							BH or PH Name: BH08	Date: 04/20/2021
				P USA				
		5	08 West S sbad, Ne	Stevens S	Street		Site Name: Queenie 15 Fede	
		Car	Sudu, Ne	W IVIEXICO	00220		RP or Incident Number: nAPF	
	LITUAL	0010 / 00"	0415	INIC : C			WSP Job Number: 31403152	
			IL SAMPLING LOG				Logged By: FS, WM, JH	Method: Hand Auger and Core-Drill
at/Long: 32.56	5970, -103.742	255/	Field Scre Hach chlo	-	PID		Hole Diameter: 2 inches	Total Depth: 1-foot bgs
omments: All -moist; D-dry;		creenings includ						
		_			쓩			
Content Chloride (ppm)	Vapor (ppm)	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol		Litholog	y/Remarks
D D <156	0.1 N	N BH08	0.5	0	SP	graii	n, some caliche gravel ((	rn, poorly graded, fine-very fine 0.5-3mm), moderately consolidat
D <156	0.4 N	BH08	1	1		no s	tain, no odor	
					T	D @ 1-fo	ot bgs	



PHOTOGRAPHIC LOG						
Marathon Oil Permian,	Queenie 15 Federal #001H	31403152.001				
LLC.	Lea County, NM					

Photo No.	Date			
1	April 20, 2021			
East view during delineation				

activities via hand auger.



Photo No.	Date			
2	April 20, 2021			
West wiery during delineation				

West view during delineation activities via hand auger.





PHOTOGRAPHIC LOG					
Marathon Oil Permian,	Queenie 15 Federal #001H	31403152.001			
LLC.	Lea County, NM				

Photo No. Date

3 May 13, 2021

East view during delineation

activities via core drill.



Photo No. Date

4 May 13, 2021

West view during delineation

West view during delineation activities via core drill.





# **Environment Testing America**

### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-549-1

Laboratory Sample Delivery Group: 31403152.001 Client Project/Site: Queenie 15 Federal #001H

For:

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

Attn: Joseph Hernandez

MRAMER

Authorized for release by: 4/26/2021 12:35:48 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

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Released to Imaging: 8/10/2021 2:03:58 PM

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.

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12

13

1.4

Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H

Laboratory Job ID: 890-549-1 SDG: 31403152.001

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### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-549-1

### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** 

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

GC Semi VOA

Qualifier **Qualifier Description** 

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

**HPLC/IC** 

Qualifier **Qualifier Description** 

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

Duplicate Error Ratio (normalized absolute difference) **DER** 

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE) DL

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) Minimum Detectable Concentration (Radiochemistry) MDC

MDL Method Detection Limit Minimum Level (Dioxin) ML MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**Practical Quantitation Limit PQL** 

**PRES** Presumptive QC **Quality Control** 

**RER** Relative Error Ratio (Radiochemistry)

RI Reporting Limit or Requested Limit (Radiochemistry)

**RPD** Relative Percent Difference, a measure of the relative difference between two points

**TEF** Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

Eurofins Xenco, Carlsbad

Project/Site: Queenie 15 Federal #001H SDG: 31403152.001

### **Case Narrative**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-549-1 SDG: 31403152.001

Job ID: 890-549-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-549-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/20/2021 4:34 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 was 2.0° C.

### Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH01 (890-549-1), BH02 (890-549-2), BH03 (890-549-3) and BH04 (890-549-4).

#### **GC VOA**

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

#### GC Semi VOA

Method 8015B NM: The laboratory control sample (LCS) for preparation batch 880-2116 and analytical batch 880-2138 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10>. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

### **General Chemistry**

Method 300.0: The matrix spike (MS) recoveries for preparation batch 880-2236 and analytical batch 880-2237 were outside control limits. Non-homogeneity is 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.

#### **Organic Prep**

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

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

### **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-549-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152.001

**Client Sample ID: BH01** 

Date Collected: 04/20/21 08:50 Date Received: 04/20/21 16:34

Sample Depth: - 0.5

Lab Sample ID: 890-549-1

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:46	1
Toluene	0.00460		0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:46	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:46	1
m-Xylene & p-Xylene	0.0498		0.00400		mg/Kg		04/22/21 10:00	04/22/21 15:46	1
o-Xylene	0.00766		0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:46	1
Xylenes, Total	0.0575		0.00400		mg/Kg		04/22/21 10:00	04/22/21 15:46	1
Total BTEX	0.0621		0.00400		mg/Kg		04/22/21 10:00	04/22/21 15:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130				04/22/21 10:00	04/22/21 15:46	1
1,4-Difluorobenzene (Surr)	112		70 - 130				04/22/21 10:00	04/22/21 15:46	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	392	*+	49.9		mg/Kg		04/21/21 16:46	04/22/21 20:24	1
Diesel Range Organics (Over C10-C28)	3550		49.9		mg/Kg		04/21/21 16:46	04/22/21 20:24	1
Oll Range Organics (Over C28-C36)	636		49.9		mg/Kg		04/21/21 16:46	04/22/21 20:24	1
Total TPH	4580		49.9		mg/Kg		04/21/21 16:46	04/22/21 20:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130				04/21/21 16:46	04/22/21 20:24	1
o-Terphenyl	81		70 - 130				04/21/21 16:46	04/22/21 20:24	1

	nromatogra	phy - Solul	ole						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3280		24.8		mg/Kg			04/23/21 02:28	5

Lab Sample ID: 890-549-2 **Client Sample ID: BH02** Date Collected: 04/20/21 09:51 **Matrix: Solid** 

Date Received: 04/20/21 16:34

Sample Depth: - 0.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/22/21 10:00	04/22/21 16:07	1
Toluene	<0.00202	U	0.00202		mg/Kg		04/22/21 10:00	04/22/21 16:07	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		04/22/21 10:00	04/22/21 16:07	1
m-Xylene & p-Xylene	0.00542		0.00404		mg/Kg		04/22/21 10:00	04/22/21 16:07	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		04/22/21 10:00	04/22/21 16:07	1
Xylenes, Total	0.00542		0.00404		mg/Kg		04/22/21 10:00	04/22/21 16:07	1
Total BTEX	0.00542		0.00404		mg/Kg		04/22/21 10:00	04/22/21 16:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130				04/22/21 10:00	04/22/21 16:07	1
1,4-Difluorobenzene (Surr)	114		70 - 130				04/22/21 10:00	04/22/21 16:07	1

Eurofins Xenco, Carlsbad

#### Client Sample Results

Client: WSP USA Inc. Job ID: 890-549-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152.001

Client Sample ID: BH02

Date Collected: 04/20/21 09:51 Date Received: 04/20/21 16:34

Sample Depth: - 0.5

Lab Sample ID: 890-549-2 **Matrix: Solid** 

Method: 8015B NM - Diesel Range Organics (DRO) (GC) Result Qualifier Analyte RL **MDL** Unit Prepared Analyzed Dil Fac 49.9 04/21/21 16:46 04/22/21 20:45 **Gasoline** Range Organics 86.5 \*+ mg/Kg (GRO)-C6-C10 04/21/21 16:46 04/22/21 20:45 **Diesel Range Organics (Over** 49.9 mg/Kg 4930 C10-C28) 04/21/21 16:46 04/22/21 20:45 **Oll Range Organics (Over** 846 49.9 mg/Kg C28-C36) **Total TPH** 49.9 mg/Kg 04/21/21 16:46 04/22/21 20:45 5860 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 119 70 - 130 04/21/21 16:46 04/22/21 20:45 o-Terphenyl 90 70 - 130 04/21/21 16:46 04/22/21 20:45 Method: 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac

Client Sample ID: BH03 Lab Sample ID: 890-549-3

50.2

mg/Kg

Date Collected: 04/20/21 10:12 Date Received: 04/20/21 16:34

Sample Depth: - 0.5

1,4-Difluorobenzene (Surr)

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:28	1
Toluene	0.00489		0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:28	1
Ethylbenzene	0.00314		0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:28	1
m-Xylene & p-Xylene	0.126		0.00401		mg/Kg		04/22/21 10:00	04/22/21 16:28	1
o-Xylene	0.00556		0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:28	1
Xylenes, Total	0.132		0.00401		mg/Kg		04/22/21 10:00	04/22/21 16:28	1
Total BTEX	0.140		0.00401		mg/Kg		04/22/21 10:00	04/22/21 16:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	184	S1+	70 - 130				04/22/21 10:00	04/22/21 16:28	1

70 - 130

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	551	*+	50.0		mg/Kg		04/21/21 16:46	04/22/21 21:06	1
Diesel Range Organics (Over C10-C28)	4070		50.0		mg/Kg		04/21/21 16:46	04/22/21 21:06	1
Oll Range Organics (Over C28-C36)	817		50.0		mg/Kg		04/21/21 16:46	04/22/21 21:06	1
Total TPH	5440		50.0		mg/Kg		04/21/21 16:46	04/22/21 21:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				04/21/21 16:46	04/22/21 21:06	1
o-Terphenyl	80		70 - 130				04/21/21 16:46	04/22/21 21:06	1

Analyte Result Qualifier RL MDL Unit

101

5700

Prepared Analyzed Dil Fac Chloride 1980 24.9 mg/Kg 04/23/21 16:08

Eurofins Xenco, Carlsbad

04/23/21 16:03

04/22/21 10:00 04/22/21 16:28

Matrix: Solid

#### **Client Sample Results**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-549-1

SDG: 31403152.001

Client Sample ID: BH04

Date Collected: 04/20/21 10:40 Date Received: 04/20/21 16:34

Sample Depth: - 0.5

Lab Sample ID: 890-549-4

. Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00354		0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:48	1
Toluene	0.0640		0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:48	1
Ethylbenzene	0.0267		0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:48	1
m-Xylene & p-Xylene	0.224		0.00399		mg/Kg		04/22/21 10:00	04/22/21 16:48	1
o-Xylene	0.0599		0.00200		mg/Kg		04/22/21 10:00	04/22/21 16:48	1
Xylenes, Total	0.284		0.00399		mg/Kg		04/22/21 10:00	04/22/21 16:48	1
Total BTEX	0.378		0.00399		mg/Kg		04/22/21 10:00	04/22/21 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	304	S1+	70 - 130				04/22/21 10:00	04/22/21 16:48	1
1,4-Difluorobenzene (Surr)	121		70 - 130				04/22/21 10:00	04/22/21 16:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	924	*+	49.9		mg/Kg		04/21/21 16:46	04/22/21 21:27	1
Diesel Range Organics (Over C10-C28)	2330		49.9		mg/Kg		04/21/21 16:46	04/22/21 21:27	1
Oll Range Organics (Over C28-C36)	382		49.9		mg/Kg		04/21/21 16:46	04/22/21 21:27	1
Total TPH	3640		49.9		mg/Kg		04/21/21 16:46	04/22/21 21:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	127		70 - 130				04/21/21 16:46	04/22/21 21:27	1
o-Terphenyl	92		70 - 130				04/21/21 16:46	04/22/21 21:27	1

Method: 300.0 - Anions, Ion Ch	nromatogra	phy - Solu	ıble						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	892		4.96		mg/Kg			04/23/21 16:13	1

#### **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-549-1

Project/Site: Queenie 15 Federal #001H

SDG: 31403152.001

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)	
890-549-1	BH01	127	112	
890-549-2	BH02	98	114	
890-549-3	BH03	184 S1+	101	
890-549-4	BH04	304 S1+	121	
LCS 880-2100/1-A	Lab Control Sample	94	112	
LCSD 880-2100/2-A	Lab Control Sample Dup	90	102	
MB 880-2100/5-A	Method Blank	112	100	

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

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

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recove
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-549-1	BH01	102	81	
890-549-2	BH02	119	90	
890-549-3	BH03	108	80	
890-549-4	BH04	127	92	
LCS 880-2116/2-A	Lab Control Sample	110	91	
LCSD 880-2116/3-A	Lab Control Sample Dup	107	88	
MB 880-2116/1-A	Method Blank	107	99	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H

Job ID: 890-549-1

SDG: 31403152.001

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2100/5-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

Prep Batch: 2100

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	04/22/21 10:00	04/22/21 13:41	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/22/21 10:00	04/22/21 13:41	1

Lab Sample ID: LCS 880-2100/1-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Prep Batch: 2100

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08422		mg/Kg		84	70 - 130	
Toluene	0.100	0.1007		mg/Kg		101	70 - 130	
Ethylbenzene	0.100	0.09893		mg/Kg		99	70 - 130	
m-Xylene & p-Xylene	0.200	0.1969		mg/Kg		98	70 - 130	
o-Xylene	0.100	0.09731		mg/Kg		97	70 - 130	
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LCS LCS

Surrogate	%Recovery Qualifie	er Limits
4-Bromofluorobenzene (Surr)	94	70 - 130
1.4-Difluorobenzene (Surr)	112	70 - 130

Lab Sample ID: LCSD 880-2100/2-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 2100

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08720		mg/Kg		87	70 - 130	3	35
Toluene	0.100	0.09383		mg/Kg		94	70 - 130	7	35
Ethylbenzene	0.100	0.09142		mg/Kg		91	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1861		mg/Kg		93	70 - 130	6	35
o-Xylene	0.100	0.09027		mg/Kg		90	70 - 130	8	35

LCSD LCSD

Surrogate	%Recovery Qualifie	r Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1.4-Difluorobenzene (Surr)	102	70 - 130

Client: WSP USA Inc. Job ID: 890-549-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152.001

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

Lab Sample ID: MB 880-2116/1-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2116

MB MB Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Analyte Gasoline Range Organics <50.0 U 50.0 mg/Kg (GRO)-C6-C10 04/21/21 16:46 04/22/21 12:04 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg C10-C28) Oll Range Organics (Over C28-C36) 50.0 04/21/21 16:46 04/22/21 12:04 <50.0 U mg/Kg Total TPH <50.0 U 50.0 mg/Kg 04/21/21 16:46 04/22/21 12:04

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/21/21 16:46	04/22/21 12:04	1
o-Terphenyl	99		70 - 130	04/21/21 16:46	04/22/21 12:04	1

Lab Sample ID: LCS 880-2116/2-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client Sample ID: Lab Control Sample **Prep Type: Total/NA** 

Prep Batch: 2116

Spike LCS LCS %Rec. Analyte Added Result Qualifier D %Rec Limits Unit Gasoline Range Organics 1000 1387 \*+ mg/Kg 139 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 975.4 mg/Kg 98 70 - 130 C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	r Limits
1-Chlorooctane	110	70 - 130
o-Terphenyl	91	70 - 130

Lab Sample ID: LCSD 880-2116/3-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 2116

LCSD LCSD RPD Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit 1000 1281 128 70 - 130 8 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 936.8 mg/Kg 94 70 - 130 20 C10-C28)

LCSD LCSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 107 70 - 130 70 - 130 o-Terphenyl 88

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2178/1-A

**Matrix: Solid** 

**Analysis Batch: 2181** 

Client Sample ID: Method Blank

**Prep Type: Soluble** 

MB MB RL Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U 04/22/21 23:56 mg/Kg

Lab Sample ID: LCS 880-2178/2-A

#### **QC Sample Results**

Client: WSP USA Inc. Job ID: 890-549-1 Project/Site: Queenie 15 Federal #001H

SDG: 31403152.001

Method: 300.0 - Anions, Ion Chromatography (Continued)

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

**Matrix: Solid Analysis Batch: 2181** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits D Chloride 250 253.2 mg/Kg 101 90 - 110

Lab Sample ID: LCSD 880-2178/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2181** 

Spike LCSD LCSD %Rec. **RPD** Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 260.0 104 90 - 110 mg/Kg

Lab Sample ID: MB 880-2236/1-A **Client Sample ID: Method Blank Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2237** 

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Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Chloride <5.00 U 5.00 04/23/21 15:32 mg/Kg

Lab Sample ID: LCS 880-2236/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 2237** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit %Rec Limits Chloride 250 255.5 90 - 110 mg/Kg 102

Lab Sample ID: LCSD 880-2236/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 2237** 

LCSD LCSD RPD Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 260.6 104 90 - 110 2 20 mg/Kg

#### **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-549-1

 Project/Site: Queenie 15 Federal #001H
 SDG: 31403152.001

#### **GC VOA**

#### Prep Batch: 2100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-549-1	BH01	Total/NA	Solid	5035	
890-549-2	BH02	Total/NA	Solid	5035	
890-549-3	BH03	Total/NA	Solid	5035	
890-549-4	BH04	Total/NA	Solid	5035	
MB 880-2100/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### **Analysis Batch: 2135**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-549-1	BH01	Total/NA	Solid	8021B	2100
890-549-2	BH02	Total/NA	Solid	8021B	2100
890-549-3	BH03	Total/NA	Solid	8021B	2100
890-549-4	BH04	Total/NA	Solid	8021B	2100
MB 880-2100/5-A	Method Blank	Total/NA	Solid	8021B	2100
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	8021B	2100
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2100

#### **GC Semi VOA**

#### Prep Batch: 2116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-549-1	BH01	Total/NA	Solid	8015NM Prep	
890-549-2	BH02	Total/NA	Solid	8015NM Prep	
890-549-3	BH03	Total/NA	Solid	8015NM Prep	
890-549-4	BH04	Total/NA	Solid	8015NM Prep	
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 2138**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-549-1	BH01	Total/NA	Solid	8015B NM	2116
890-549-2	BH02	Total/NA	Solid	8015B NM	2116
890-549-3	BH03	Total/NA	Solid	8015B NM	2116
890-549-4	BH04	Total/NA	Solid	8015B NM	2116
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015B NM	2116
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2116
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2116

#### **HPLC/IC**

#### Leach Batch: 2178

<b>Lab Sample ID</b> 890-549-1	Client Sample ID BH01	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-2178/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### **Analysis Batch: 2181**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-549-1	BH01	Soluble	Solid	300.0	2178

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#### **QC Association Summary**

 Client: WSP USA Inc.
 Job ID: 890-549-1

 Project/Site: Queenie 15 Federal #001H
 SDG: 31403152.001

#### **HPLC/IC (Continued)**

#### **Analysis Batch: 2181 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-2178/1-A	Method Blank	Soluble	Solid	300.0	2178
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	300.0	2178
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2178

#### Leach Batch: 2236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-549-2	BH02	Soluble	Solid	DI Leach	
890-549-3	BH03	Soluble	Solid	DI Leach	
890-549-4	BH04	Soluble	Solid	DI Leach	
MB 880-2236/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2236/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2236/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### **Analysis Batch: 2237**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-549-2	BH02	Soluble	Solid	300.0	2236
890-549-3	BH03	Soluble	Solid	300.0	2236
890-549-4	BH04	Soluble	Solid	300.0	2236
MB 880-2236/1-A	Method Blank	Soluble	Solid	300.0	2236
LCS 880-2236/2-A	Lab Control Sample	Soluble	Solid	300.0	2236
LCSD 880-2236/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2236

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Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-549-1 SDG: 31403152.001

Lab Sample ID: 890-549-1

**Matrix: Solid** 

**Client Sample ID: BH01** Date Collected: 04/20/21 08:50

Date Received: 04/20/21 16:34

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2100	04/22/21 10:00	KL	XM
Total/NA	Analysis	8021B		1	2135	04/22/21 15:46	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 20:24	AJ	XM
Soluble	Leach	DI Leach			2178	04/22/21 17:45	СН	XM
Soluble	Analysis	300.0		5	2181	04/23/21 02:28	WP	XM

**Client Sample ID: BH02** 

Date Collected: 04/20/21 09:51

Date Received: 04/20/21 16:34

Lab Sample ID: 890-549-2

**Matrix: Solid** 

Batch Batch Dilution Batch **Prepared** Method **Prep Type** Type Run **Factor** Number or Analyzed Analyst Lab Total/NA Prep 5035 2100 04/22/21 10:00 KL XM Total/NA 8021B 2135 04/22/21 16:07 KL XM Analysis 1 Total/NA Prep 8015NM Prep 2116 04/21/21 16:46 DM XM Total/NA Analysis 8015B NM 2138 04/22/21 20:45 AJ XM1 Soluble Leach DI Leach 2236 04/23/21 14:18 CH ΧM Soluble XM Analysis 300.0 10 2237 04/23/21 16:03 WP

**Client Sample ID: BH03** 

Date Collected: 04/20/21 10:12

Date Received: 04/20/21 16:34

Lab Sample ID: 890-549-3

Matrix: Solid

_	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2100	04/22/21 10:00	KL	XM
Total/NA	Analysis	8021B		1	2135	04/22/21 16:28	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 21:06	AJ	XM
Soluble	Leach	DI Leach			2236	04/23/21 14:18	CH	XM
Soluble	Analysis	300.0		5	2237	04/23/21 16:08	WP	XM

**Client Sample ID: BH04** 

Date Collected: 04/20/21 10:40

Date Received: 04/20/21 16:34

Lab Sample ID: 890-549-4 Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2100	04/22/21 10:00	KL	XM
Total/NA	Analysis	8021B		1	2135	04/22/21 16:48	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 21:27	AJ	XM
Soluble	Leach	DI Leach			2236	04/23/21 14:18	СН	XM
Soluble	Analysis	300.0		1	2237	04/23/21 16:13	WP	XM

**Laboratory References:** 

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

#### **Accreditation/Certification Summary**

Client: WSP USA Inc. Job ID: 890-549-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152.001

#### **Laboratory: Eurofins Xenco, Midland**

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

Authority		ogram	Identification Number	Expiration Date
Texas	NI	ELAP	T104704400-20-21	06-30-21
The following englyte	a are included in this ren	art but the laboratory is a		The Parameter Lands and Lands at the Lands
0 ,		ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for wh
the agency does not	offer certification.	•	, , ,	I his list may include analytes for wh
0 ,		Matrix	Analyte	I his list may include analytes for wh
the agency does not	offer certification.	•	, , ,	This list may include analytes for wh

#### **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-549-1

SDG: 31403152.001

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

#### **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.

#### **Laboratory References:**

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

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#### **Sample Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-549-1

SDG: 31403152.001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-549-1	BH01	Solid	04/20/21 08:50	04/20/21 16:34	- 0.5
890-549-2	BH02	Solid	04/20/21 09:51	04/20/21 16:34	- 0.5
890-549-3	BH03	Solid	04/20/21 10:12	04/20/21 16:34	- 0.5
890-549-4	BH04	Solid	04/20/21 10:40	04/20/21 16:34	- 0.5

4.20:21 16242

Revised Date: 08/25/2020 Rev. 2020.

WORK ORDER NOTES: NAPP2110325623

eurofins WBS CL.21.01096 **Environment Testing** 

## Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300

Work Order No:

	Date/Time	Received by: (Signature)	Received by	: (Signature)	Relinquished by: (Signature)	Date/Time	Dat	re)	Received by: (Signature)	) ,	: (Signature)	ReInquished by: (Signature)
		conditions I the control usly negotiated.	It assigns standard terms and conditions re due to circumstances beyond the contro will be enforced unless previously negotis	contractors. It assigues to losses are due to These terms will be	nco, its affiliates and sub incurred by the client if su Xenco, but not analyzed.	iny to Eurofins Xe ses or expenses i mitted to Eurofins	ent compa for any los ample subi	chase order from cli e any responsibility rge of \$5 for each s	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	ishment of sam or the cost of sa owill be applie	ocument and relinqui o will be liable only for mum charge of \$85.00	Notice: Signature of this of service. Eurofins Xencof Eurofins Xenco. A min
	470 / 7471	Hg: 1631 / 245.1 / 7470 / 7471	Ag TI U	Cu Pb Mn Mo Ni Se	d Cr Co Cu Pb	As Ba Be C	A Sb	6010: 8RC	TCLP/SPL	analyzed	nd Motal(s) to be	ethod
	Sn U V Zn	Ag SiO, Na Sr TI	Mn Mo Ni K Se /	Fe Pb Mg	Cd Ca Cr Co Cu	As Ba Be B	Al Sb A	Texas 11	8RCRA 13PPM	)20:	10 200.8 / 6020:	Total 200.7 / 6010
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							-	O Us	20/21 0850	S: 4/		ІОНВ
Dar	Sample Comments	San				BTE	C # TPi	Depth Grab/ # of Comp Cont	Date Time E	Matrix Sar		Sample Identification
. 4.	NaOH+Ascorbic Acid: SAPC	NaOH+As	-		-	ΞX	-1 1	2.0	Corrected Temperature:	Corr		Total Containers:
0 -	Zn Acetate+NaOH: Zn	Zn Acetat	itody	890-549 Chain of Custody	890-5	(E	(F	2.2	Temperature Reading:	N/A Tem	Is: Yes (No)	Sample Custody Seals:
	NaSO <sub>3</sub>	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>				EP.		10		N/A Corr	s: Yes No	Cooler Custody Seals:
	NABIS	NaHSO₄: NABIS				A		FOOT	Thermometer ID:		<u>a</u>	Samples Received Intact:
	70	H₃PO₄: HP				)=	nete	Yes No	s No Wet Ice:	ank: Yes	PT Temp Blank:	SAMPLE RECEIPT
	NaOH: Na	H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub>				8		L.,	the lab, if received by 4:30pm			PO#:
		HCL: HC				02	. `	ay received by	TAT starts the day received by	Smith	Fatima Smith	Sampler's Name:
		Cool: Cool				(i) (o)			Due Date:	ty	Lea county	Project Location:
	DI Water: H <sub>2</sub> O	None: NO					Code	Rush	Routine	2.001	31403152.001	Project Number:
	Preservative Codes	Pres		ANALYSIS REQUEST	ANALY				F OCH Turn Around	Federals	Queenie 15 Federal # OCH	Project Name:
	Other:	ADaPT LL 0	Deliverables: EDD	Delive	cem	ez@usp	nand	resoph.nemandez@usp.cem	Email:	702-2329	(281) 707	Phone:
	TRRP Level IV L	<u> </u>	rting: Level II ☐ Levi	Repor		•		City, State ZIP:	79705	Z	Midland	City, State ZIP:
		]	State of Project:	State		1		Address:	K	Å	Ç	Address:
	RRC Superfund	] PRP□ Brownfields □ RRC □	Program: UST/PST 🗌 PF	Progra		4	-	Company Name:	reet	Jorih		Company Name:
	is .	Work Order Comments	Wo			1		Bill to: (if different)		Hernandez	Joseph H	Project Manager:
	of	www.xenco.com Page	www.x		Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	392-7550, Carlsb	VM (575)	Hobbs, N				
					EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296	585-3443. Lubbo	TX (915)	FI Paso		Xenco	Xe	

**Eurofins Xenco, Carlsbad** 

# **Chain of Custody Record**

Ver 11/01/2020												
		-	Remarks.	°C and Other Remarks	Cooler Temperature(s)	Cooler Te						Custody Seals Intact Custody Seal No
Company	ne:	Date/Time:	T. C.	***************************************	by:	Received by		Company	THE PROPERTY OF THE PROPERTY O		Date/Time:	Relinquished by:
Company	ne:	Date/Time			By ( )	Received by	<u></u>	Company			Date/Time:	Reinquisned by
Company	Time: 212121230	Date/Tin	12		D.	Received by		Company			Date/Time:	Keindmisned by (M) (M) A 1.51-71
	t.	Method of Shipment:	Metho		,		Time			Date		Empty Kit Relinquished by
			nents.	C Requirements.	Special Instructions/Q	cıal İnst	Spe		2	rable Rank	Primary Deliverable Rank	Deliverable Requested   II, III IV Other (specify)
than 1 month)  Months	are retained longer Archive For	if samples ly Lab	may be assessed if samples Disposal By Lab	fee may be	Sample Disposal (A	nple Dis	San					Possible Hazard Identification Unconfirmed
ould be brought to Eurofins Xenco	to accreditation status sh	Any changes	/ill be provided	instructions w	atory or other	LC labor enco LLC	S Xenco L Eurofins X	ack to the Eurofin I complicance to E	t be shipped by ttesting to said	samples must of Custody at	being analyzed, the urn the signed Chain	narinal accreditation in the state of Unigin isted above for analysis/rests/matrix being analyzed, the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brough to Eurofins Xenco LLC aboratory or other instructions will be provided. Any changes to accreditation status should be brough to Eurofins Xenco LLC aboratory or other instructions will be provided. Any changes to accreditation status should be brough to Eurofins Xenco LLC aboratory or other instructions will be provided. Any changes to accreditation status should be brough to Eurofins Xenco LLC.
the laboratory does not currently	inder chain-of-custody If	t is forwarded u	ımple shipment	ories. This sa	ntract laborat	out subco	nce upon o	editation compliar	analyte & accre	p of method &	places the ownershi	Note: Since laboratory accreditations are subject to change, Eurofins Xenco LLC
	an shi											
	ensiste d											
TOTAL PROPERTY AND A STATE OF THE STATE OF T	entantiis											
Authorite Control of the Control of	Ą				×	×		Solid		10 40 Mountain	4/20/21	ВН04 (890-549-4)
					×	×		Solid	-	10 12 Mountain	4/20/21	вноз (890-549-3)
	<u>.</u>				×	×		Solid	-	09 51 Mountain	4/20/21	BH02 (890-549-2)
	-				×	×		Solid	-	08 50 Mountain	4/20/21	BH01 (890-549-1)
		land, a				7	7000	ation Code:	Preserv	X	X	
Special Instructions/Note	Total Number				8021B/5035FP	300_ORGFM_2 8015MOD_NM/	Field Filtered Perform MS/I	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	03 %	Sample Time	Sample Date	Sample Identification - Client ID (Lab ID)
	of co Other				_Calc E						SSOW#:	ole
VV pH 4-5 Z other (specify)	,				TEX		HALL CONTROL				Project #: 88000203	Project Name: Queenie 15 Federal #001H
; < C -	· :										# OW	Email
⊣ох	G Amchlor H Ascorbic Acid	-									PO#	Phone: 432-704-5440(Tel)
cid P Na2O4S 4 Q Na2SO3	D Nitric Acid E NaHSO4											State Zip TX, 79701
0 Z 3	B NaOH									lays)	TAT Requested (days)	City Midland
- 1	Preservation Codes		Requested	alysis Re	An					ted	Due Date Requested 4/26/2021	Address. 1211 W Florida Ave ,
	Job #: 890-549-1			te)	Accreditations Required (See note) NELAP - Texas	Texas	Accreditations Requ NELAP - Texas					Eurofins Xenco
1	Page: Page 1 of 1	igin:	State of Origin: New Mexico	3	E-Mail essica kramer@eurofinset con	er@eur	za kramı	E-Mail jessic			Phone	Chert Contact Shipping/Receiving
	COC No: 890-177 1	cking No(s)	Carrier Tracking No(s)			ğ	<sub>Lab PM</sub> Kramer, Jessica	Lab PM Krame			Sampler	Client Information (Sub Contract Lab)
America						\$			9			Carlsbad NM 88220 Phone 575-988-3199 Fax: 575-988-3199
fins Environment Testing	eurofins 💸					i	2	Chain of Custody Record	ان ان ان	, hain	_	1089 N Canal St.
	=											Euroins Aenco, Carispad

#### **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-549-1 SDG Number: 31403152.001

**List Source: Eurofins Carlsbad** 

Login Number: 549 List Number: 1 Creator: Clifton, Cloe

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	N/A	

Released to Imaging: 8/10/2021 2:03:58 PM

<6mm (1/4").

#### **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-549-1 SDG Number: 31403152.001

Login Number: 549 **List Source: Eurofins Midland** List Creation: 04/21/21 03:00 PM List Number: 2

Creator: Copeland, Tatiana

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	True	

<6mm (1/4").



### **Environment Testing America**

#### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-546-1

Laboratory Sample Delivery Group: Lea County NM

Client Project/Site: Queenie 15 Federal #001H - 31403152.001

For:

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

Attn: Joseph Hernandez

JURAMER

Authorized for release by: 4/26/2021 8:27:46 AM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

----- LINKS -----

Review your project results through

TOTAL TICCOM

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 8/10/2021 2:03:58 PM

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.

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Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H - 31403152.001 Laboratory Job ID: 890-546-1 SDG: Lea County NM

#### **Table of Contents**

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#### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-546-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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

**HPLC/IC** 

Qualifier **Qualifier Description** 

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

Detection Limit (DoD/DOE) DL

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 Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NFG 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)

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-546-1

SDG: Lea County NM

Job ID: 890-546-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-546-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/20/2021 4:34 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 was 2.0° C.

#### Receipt Exceptions

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH05 (890-546-1) and BH05 (890-546-2).

#### **GC VOA**

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

#### GC Semi VOA

Method 8015B NM: The laboratory control sample (LCS) for preparation batch 880-2116 and analytical batch 880-2138 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10>. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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.

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.

Page 4 of 19

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-546-1 SDG: Lea County NM

Lab Sample ID: 890-546-1

Matrix: Solid

**Client Sample ID: BH05** Date Collected: 04/20/21 11:02 Date Received: 04/20/21 16:34

Sample Depth: - 0.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		04/23/21 09:17	04/23/21 20:41	1
Toluene	0.00632		0.00202		mg/Kg		04/23/21 09:17	04/23/21 20:41	1
Ethylbenzene	0.00594		0.00202		mg/Kg		04/23/21 09:17	04/23/21 20:41	1
m-Xylene & p-Xylene	0.0199		0.00404		mg/Kg		04/23/21 09:17	04/23/21 20:41	1
o-Xylene	0.0112		0.00202		mg/Kg		04/23/21 09:17	04/23/21 20:41	1
Xylenes, Total	0.0311		0.00404		mg/Kg		04/23/21 09:17	04/23/21 20:41	1
Total BTEX	0.0434		0.00404		mg/Kg		04/23/21 09:17	04/23/21 20:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				04/23/21 09:17	04/23/21 20:41	1
1,4-Difluorobenzene (Surr)	106		70 - 130				04/23/21 09:17	04/23/21 20:41	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+	49.9		mg/Kg		04/21/21 16:46	04/22/21 15:27	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/21/21 16:46	04/22/21 15:27	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/21/21 16:46	04/22/21 15:27	1
Total TPH	<49.9	U	49.9		mg/Kg		04/21/21 16:46	04/22/21 15:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130				04/21/21 16:46	04/22/21 15:27	1
o-Terphenyl	102		70 - 130				04/21/21 16:46	04/22/21 15:27	1

	Method: 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Į	Chloride	18.8		5.02		mg/Kg			04/23/21 01:57	1

**Client Sample ID: BH05** Lab Sample ID: 890-546-2 Date Collected: 04/20/21 11:10 **Matrix: Solid** 

Sample Depth: - 1

Date Received: 04/20/21 16:34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/23/21 09:17	04/23/21 21:01	
Toluene	<0.00198	U	0.00198		mg/Kg		04/23/21 09:17	04/23/21 21:01	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/23/21 09:17	04/23/21 21:01	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/23/21 09:17	04/23/21 21:01	1
o-Xylene	0.00202		0.00198		mg/Kg		04/23/21 09:17	04/23/21 21:01	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		04/23/21 09:17	04/23/21 21:01	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		04/23/21 09:17	04/23/21 21:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130				04/23/21 09:17	04/23/21 21:01	1
1,4-Difluorobenzene (Surr)	104		70 - 130				04/23/21 09:17	04/23/21 21:01	1

Matrix: Solid

Lab Sample ID: 890-546-2

04/23/21 02:02

#### **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-546-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Client Sample ID: BH05

Date Collected: 04/20/21 11:10 Date Received: 04/20/21 16:34

Sample Depth: - 1

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U *+	49.8		mg/Kg		04/21/21 16:46	04/22/21 15:48	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		04/21/21 16:46	04/22/21 15:48	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		04/21/21 16:46	04/22/21 15:48	1
Total TPH	<49.8	U	49.8		mg/Kg		04/21/21 16:46	04/22/21 15:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130				04/21/21 16:46	04/22/21 15:48	1
o-Terphenyl	90		70 - 130				04/21/21 16:46	04/22/21 15:48	1

5.04

mg/Kg

23.0

1

14

#### **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-546-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

_			
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-546-1	BH05	114	106
890-546-2	BH05	114	104
LCS 880-2186/1-A	Lab Control Sample	113	104
LCSD 880-2186/2-A	Lab Control Sample Dup	111	102
MB 880-2186/5-A	Method Blank	89	90
Surrogate Legend			
BFB = 4-Bromofluorober	nzene (Surr)		
DFBZ = 1,4-Difluorobenz	zene (Surr)		

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-546-1	BH05	113	102	
890-546-2	BH05	99	90	
LCS 880-2116/2-A	Lab Control Sample	110	91	
LCSD 880-2116/3-A	Lab Control Sample Dup	107	88	
MB 880-2116/1-A	Method Blank	107	99	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc.

Job ID: 890-546-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2186/5-A

Matrix: Solid

Analysis Batch: 2192

Client Sample ID: Method Blank

Prep Type: Total/NA

					Prep Bate	ch: 2186
RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
				04/00/04 00 47	0.4/00/04 40 54	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/23/21 09:17	04/23/21 13:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/23/21 09:17	04/23/21 13:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/23/21 09:17	04/23/21 13:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/23/21 09:17	04/23/21 13:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/23/21 09:17	04/23/21 13:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/23/21 09:17	04/23/21 13:51	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/23/21 09:17	04/23/21 13:51	1

 MB

 %Recovery
 Qualifier
 Limits
 Prepared
 Analyzed
 Dil Fac

 89
 70 - 130
 04/23/21 09:17
 04/23/21 13:51
 1

 90
 70 - 130
 04/23/21 09:17
 04/23/21 13:51
 1

Lab Sample ID: LCS 880-2186/1-A

Matrix: Solid

Surrogate

**Analysis Batch: 2192** 

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 2186

Spike LCS LCS %Rec. Analyte Added Result Qualifier %Rec Limits Unit Benzene 0.100 0.1042 mg/Kg 104 70 - 130 0.100 0.09834 Toluene mg/Kg 98 70 - 130 0.100 0.1032 103 70 - 130 Ethylbenzene mg/Kg 0.200 0.2202 110 70 - 130 m-Xylene & p-Xylene mg/Kg o-Xylene 0.100 0.1102 mg/Kg 110 70 - 130

LCS LCS

MB MB

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1.4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: LCSD 880-2186/2-A

**Matrix: Solid** 

**Analysis Batch: 2192** 

Client Sample ID: Lab Control Sample Dup

Prep Batch: 2186

Prep Batch: 2186

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1049		mg/Kg		105	70 - 130	1	35	
Toluene	0.100	0.1007		mg/Kg		101	70 - 130	2	35	
Ethylbenzene	0.100	0.1078		mg/Kg		108	70 - 130	4	35	
m-Xylene & p-Xylene	0.200	0.2299		mg/Kg		115	70 - 130	4	35	
o-Xylene	0.100	0.1149		mg/Kg		115	70 - 130	4	35	

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	111		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

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Job ID: 890-546-1 Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

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

Lab Sample ID: MB 880-2116/1-A

**Analysis Batch: 2138** 

**Matrix: Solid** 

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 2116

	MR	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
C10-C28)									
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
Total TPH	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1

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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/21/21 16:46	04/22/21 12:04	1
o-Terphenyl	99		70 - 130	04/21/21 16:46	04/22/21 12:04	1

Lab Sample ID: LCS 880-2116/2-A **Client Sample ID: Lab Control Sample** Matrix: Solid Prep Type: Total/NA

**Analysis Batch: 2138** 

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	1387	*+	mg/Kg		139	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	975.4		mg/Kg		98	70 - 130	
C10-C28)								

LCS LCS %Recovery Qualifier Surrogate Limits 1-Chlorooctane 110 70 - 130 o-Terphenyl 91 70 - 130

Lab Sample ID: LCSD 880-2116/3-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 2116

Prep Batch: 2116

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	1281		mg/Kg		128	70 - 130	8	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	936.8		mg/Kg		94	70 - 130	4	20	
C10-C28)										

	LUSD LU	שפ
Surrogate	%Recovery Qua	alifier Limits
1-Chlorooctane	107	70 - 130
o-Terphenyl	88	70 - 130

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Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2178/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2181** 

MB MB Analyte Result Qualifier RL MDL Unit D Prepared Dil Fac Analyzed Chloride <5.00 U 5.00 mg/Kg 04/22/21 23:56

Client: WSP USA Inc. Job ID: 890-546-1 Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2178/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2181** 

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	253.2		mg/Kg		101	90 - 110	

Lab Sample ID: LCSD 880-2178/3-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid Prep Type: Soluble** 

Analysis Batch: 2181

Spike LCSD LCSD %Rec. RPD Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Chloride 250 260.0 mg/Kg 104 90 - 110 3

#### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-546-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

**GC VOA** 

Prep Batch: 2186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-546-1	BH05	Total/NA	Solid	5035	
890-546-2	BH05	Total/NA	Solid	5035	
MB 880-2186/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2186/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2186/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

**Analysis Batch: 2192** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-546-1	BH05	Total/NA	Solid	8021B	2186
890-546-2	BH05	Total/NA	Solid	8021B	2186
MB 880-2186/5-A	Method Blank	Total/NA	Solid	8021B	2186
LCS 880-2186/1-A	Lab Control Sample	Total/NA	Solid	8021B	2186
LCSD 880-2186/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2186

**GC Semi VOA** 

Prep Batch: 2116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-546-1	BH05	Total/NA	Solid	8015NM Prep	
890-546-2	BH05	Total/NA	Solid	8015NM Prep	
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 2138** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-546-1	BH05	Total/NA	Solid	8015B NM	2116
890-546-2	BH05	Total/NA	Solid	8015B NM	2116
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015B NM	2116
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2116
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2116

**HPLC/IC** 

Leach Batch: 2178

<b>Lab Sample ID</b> 890-546-1	Client Sample ID BH05	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
890-546-2	BH05	Soluble	Solid	DI Leach	
MB 880-2178/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Analysis Batch: 2181** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-546-1	BH05	Soluble	Solid	300.0	2178
890-546-2	BH05	Soluble	Solid	300.0	2178
MB 880-2178/1-A	Method Blank	Soluble	Solid	300.0	2178
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	300.0	2178
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2178

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#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-546-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**Client Sample ID: BH05** 

Date Collected: 04/20/21 11:02

Lab Sample ID: 890-546-1

Matrix: Solid

Date Received: 04/20/21 16:34

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2186	04/23/21 09:17	KL	XM
Total/NA	Analysis	8021B		1	2192	04/23/21 20:41	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 15:27	AJ	XM
Soluble	Leach	DI Leach			2178	04/22/21 17:45	CH	XM
Soluble	Analysis	300.0		1	2181	04/23/21 01:57	WP	XM

**Client Sample ID: BH05** Lab Sample ID: 890-546-2 Date Collected: 04/20/21 11:10

Date Received: 04/20/21 16:34

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2186	04/23/21 09:17	KL	XM
Total/NA	Analysis	8021B		1	2192	04/23/21 21:01	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 15:48	AJ	XM
Soluble	Leach	DI Leach			2178	04/22/21 17:45	СН	XM
Soluble	Analysis	300.0		1	2181	04/23/21 02:02	WP	XM

#### Laboratory References:

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

#### **Accreditation/Certification Summary**

Client: WSP USA Inc.

Job ID: 890-546-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

#### Laboratory: Eurofins Xenco, Midland

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

Authority P		ogram	Identification Number	Expiration Date	
Texas		ELAP	T104704400-20-21	06-30-21	
The following analytes	are included in this report by	it the laboratory is not certifi	ed by the governing authority. This list ma	av include analytee fo	
the agency does not of	fer certification.	•	, , ,	ay ilicidde allaiytes it	
0 ,		Matrix	Analyte	ay include analytes it	
the agency does not of	fer certification.	•	, , ,	ay include analytes it	

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#### **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-546-1

SDG: Lea County NM

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

#### **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.

#### Laboratory References:

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

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#### **Sample Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-546-1

SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-546-1	BH05	Solid	04/20/21 11:02	04/20/21 16:34	- 0.5
890-546-2	BH05	Solid	04/20/21 11:10	04/20/21 16:34	- 1

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Xenco

Environment Testing

Company Name:

## Chain of Custody

Houston, TX (281) 240-4200, Midland, TX (432) 704-5440, Sa EL Paso, TX (915) 585-3443. Hobbs, NM (575) 392-7550,

Description   Comparing   Comp	
Work Order Comments	
www.xenco.com Page of 1	
	Carlsbad, NM (575) 988-3199
	Lubbock, TX (806) 794-1296
Work Order No:	an Antonio, TX (210) 509-3334
	Dallas, TX (214) 902-0300

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		4.26.21634	Ove Gut	1 Autolla
(Signature) Date/Time	Relinquished by: (Signature) Received by: (Signature)	Date/Time Rel	Received by: (Signature)	Relipquished by: (Signature)
ly negotiated.	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses of expenses incurred by the client it such losses are due to current and its control of service. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	nple submitted to Eurofins Xenco,	le cost of samples and shall not assume any responsibility to the cost of samples and shall not assume any responsibility to the cost of samples and samples of \$5 for each samples applied to each project and a charge of \$5 for each samples.	of service. Eurofins Xenco will be liable only for to ferrofins Xenco. A minimum charge of \$85.00
onditions	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	nt company to Eurofins Xenco, its	ment of samples constitutes a valid purchase order from clie	Notice: Signature of this document and relinquist
Hg: 1631 / 245.1 / 7470 / 7471	Mo Ni Se Ag TI U	Sb As Ba Be Cd Cr Co Cu Pb Mn	naiyzed ICLP / SPLP 6010: 8RCRA	Girale Method(s) and Metal(s) to be analyzed
Ag SiO, Na Sr Tl Sn U V Zn	Cr Co Cu Fe Pb Mg Mn Mo Ni K Se	Sb As Ba Be B Cd Ca	D: 8RCRA 13PPM Texas 11 AI	Total 200.7 / 6010 200.8 / 6020:
			<i>/</i>	
			***	
		/	5 4/20/21 1110 11	BHOS
			5 4/20/21 1102 0.51	SCH8
Sample Comments		TPH BTE Chl	Matrix Sampled Sampled Depth Comp Cont	Sample Identification
NaOH+Ascorbic Acid: SAPC		EX	Corrected Temperature: 25	Total Containers:
Zn Acetate+NaOH: Zn	690-546 Chain of Custody	(	N/A Temperature Reading: 2.2	Sample Custody Seals: Yes No
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>		PA E F	L_	Yes Nd
NaHSO <sub>4</sub> : NABIS		1 8 A	Thermometer ID:	Samples Received Intact: Yes No
H₃PO₄: HP		0	k: Yes No Wet Ice: Yes No nete	SAMPLE RECEIPT   Temp Blank:
H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na		5	the lab, if received by 4:30pm	PO#:
		CX	TAT starts the day received by	-
Cool: Cool MeOH: Me			Due Date:	Project Location: Lea County
None: NO DI Water: H <sub>2</sub> O		de is	XRoutine Rush Code	Project Number: 31403152,001
Preservative Codes	ANALYSIS REQUEST	-	Turn Around	Project Name: Ouggnig 15 Factoral # 001 H
ADaPT L Other:	Deliverables: EDD	her ranchez@usp.com	2329 Email: joseph.	Phone: (281) 702 -
Reporting: Level III ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV☐	Reporting: Level II Level I	+		ezip: Midlan
	State of Project:	1	orth AStroot Address.	Address: 3300 VC

1089 N Canal St.

Carlsbad NM 88220 Phone 575-988-3199 Fax: 575-988-3199

**Eurofins Xenco, Carlsbad** 

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# Chain of Custody Record

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**Environment Testing** 

State, Zip TX, 79701 Note: Since laboratory accreditations are subject to change, Eurofins Xenco 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 institution accreditation in the State of Origin listed above for analysisflests/matrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately if all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC. BH05 (890-546-2) BH05 (890-546-1) Queenie 15 Federal #001H - 31403152 001 432-704-5440(Tel) Shipping/Receiving Client Information Deliverable Requested 1 II III IV, Other (specify) Possible Hazard Identification 1211 W Florida Ave mpty Kit Relinquished by Sample Identification - Client ID (Lab ID) Midland elinquished by elinquished by urofins Xenco oject Name ALCO M (Sub Contract Lab) Custody Seal No Phone: ₩O# PO# TAT Requested (days) Due Date Requested 4/26/2021 Date/Time: Date/Time: Date/Time: Primary Deliverable Rank 2 89000048 Sampler Sample Date roject #: 4/20/21 4/20/21 Date Mountain 11 10 Mountair Sample 11 02 (C=comp, Type Sample Preservation Code: Company Company Matrix Solid Solid jessica kramer@eurofinset com E-Mail Kramer, Jessica Lab PM Time NELAP - Texas Accreditations Required (See note) Perform MS/MSD (Yes or No) Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Monte Special Instructions/QC Requirements Cooler Temperature(s) °C and Other Remarks Received by: Received by × 300\_ORGFM\_28D/DI\_LEACH Chloride × × × 8015MOD\_NM/8015NM\_S\_Prep Full TPH × 8021B/5035FP\_Calc BTEX Analysis Requested State of Origin New Mexico Carrier Tracking No(s) Method of Shipment Date/Time Date/Time Total Number of containers A HCL B-NaOH C Zn Acet D Nitric Av COC No: 890-177 1 Preservation Codes H Ascorbic Acid Zn Acetate
) Nitric Acid
E NaHSO4
F MeOH
G Amchlor 890-546-1 Page 1 of 1 age: lce
DI Water
EDTA
EDA Special Instructions/Note N § < C → O R O P O Z S Company Company Ver: 11/01/2020 A Hexane
I None
AsNaO2
Na2O4S
Na2SO3
Na2S2O3 H2SO4 TSP Dodecahydrate Months

#### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-546-1

SDG Number: Lea County NM

List Source: Eurofins Carlsbad

Login Number: 546 List Number: 1 Creator: Clifton, Cloe

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	N/A	

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<6mm (1/4").

#### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-546-1 SDG Number: Lea County NM

List Source: Eurofins Midland

List Creation: 04/21/21 02:58 PM

Creator: Copeland, Tatiana

Login Number: 546

List Number: 2

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	True	

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**Eurofins Carlsbad** 

<6mm (1/4").



### **Environment Testing America**

#### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-545-1

Laboratory Sample Delivery Group: Lea County NM

Client Project/Site: Queenie 15 Federal #001H - 31403152.001

For:

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

Attn: Joseph Hernandez

JURAMER

Authorized for release by: 4/23/2021 3:23:41 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

.....LINKS

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 8/10/2021 2:03:58 PM

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.

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Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H - 31403152.001 Laboratory Job ID: 890-545-1 SDG: Lea County NM

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## **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-545-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

LCS and/or LCSD is outside acceptance limits, high biased.

F1 MS and/or MSD recovery exceeds control limits.

U Indicates the analyte was analyzed for but not detected.

**HPLC/IC** 

Qualifier **Qualifier Description** 

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)

Estimated Detection Limit (Dioxin) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" Minimum Detectable Activity (Radiochemistry) MDA MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit Minimum Level (Dioxin) ML 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)

Reporting Limit or Requested Limit (Radiochemistry) RL

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: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-545-1

SDG: Lea County NM

Job ID: 890-545-1

Laboratory: Eurofins Xenco, Carlsbad

**Narrative** 

Job Narrative 890-545-1

## Comments

No additional comments.

## Receipt

The sample was received on 4/20/2021 4:34 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 2.0° C.

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

## GC Semi VOA

Method 8015B NM: The laboratory control sample (LCS) for preparation batch 880-2116 and analytical batch 880-2138 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10>. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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.

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

## **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-545-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Client Sample ID: BH06

Lab Sample ID: 890-545-1

. Matrix: Solid

Date Collected: 04/20/21 12:04 Date Received: 04/20/21 16:34 Sample Depth: - 0.5

Method: 8021B - Volatile Orga	nic Compounds (	(GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:03	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:03	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:03	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/22/21 10:00	04/22/21 14:03	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:03	1
Xylenes, Total	< 0.00399	U	0.00399		mg/Kg		04/22/21 10:00	04/22/21 14:03	1
Total BTEX	<0.00399	U	0.00399		mg/Kg		04/22/21 10:00	04/22/21 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		70 - 130				04/22/21 10:00	04/22/21 14:03	1

Δnalvte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Method: 8015B NM - Diesel Range	Organics (DRO) (GC)						
1,4-Difluorobenzene (Surr)	110	70 - 130			04/22/21 10:00	04/22/21 14:03	1
4-Bromofluorobenzene (Surr)	91	70 - 130			04/22/21 10:00	04/22/21 14:03	1

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+ F1	49.9		mg/Kg		04/21/21 16:46	04/22/21 14:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/21/21 16:46	04/22/21 14:25	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/21/21 16:46	04/22/21 14:25	1
Total TPH	<49.9	U	49.9		mg/Kg		04/21/21 16:46	04/22/21 14:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130				04/21/21 16:46	04/22/21 14:25	1
o-Terphenyl	98		70 - 130				04/21/21 16:46	04/22/21 14:25	1

Method: 300.0 - Anions, Ion Chromatography - Soluble									
	Analyte	Result Qualifier	RL	MDL Unit	. <b>D</b>	Prepared	Analyzed	Dil Fac	
	Chloride	64.1	5.01	mg/	Kg		04/21/21 18:01	1	

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Released to Imaging: 8/10/2021 2:03:58 PM

## **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-545-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-545-1	BH06	91	110
LCS 880-2100/1-A	Lab Control Sample	94	112
LCSD 880-2100/2-A	Lab Control Sample Dup	90	102
MB 880-2100/5-A	Method Blank	112	100
Surrogate Legend			
BFB = 4-Bromofluorober	zene (Surr)		
DFBZ = 1,4-Difluorobenz	ene (Surr)		

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			
890-545-1 MS	BH06			
890-545-1 MSD	BH06			
Surrogate Legend				
BFB = 4-Bromofluoro	benzene (Surr)			
DFBZ = 1,4-Difluorob	enzene (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)	
890-545-1	BH06	105	98	
890-545-1 MS	BH06	106	86	
890-545-1 MSD	BH06	107	87	
LCS 880-2116/2-A	Lab Control Sample	110	91	
LCSD 880-2116/3-A	Lab Control Sample Dup	107	88	
MB 880-2116/1-A	Method Blank	107	99	
Surrogate Legend				
1CO = 1-Chlorooctane				
OTPH = o-Terphenyl				

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Client: WSP USA Inc. Job ID: 890-545-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2100/5-A

**Matrix: Solid** 

Analyte

Benzene Toluene Ethylbenzene m-Xylene & p-Xylene

o-Xylene

Xylenes, Total

**Analysis Batch: 2135** 

Client Sample ID: Method Blank

04/22/21 13:41

04/22/21 13:41

04/22/21 13:41

Prep Type: Total/NA

Prep Batch: 2100

MB	MB							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	1
<0.00400	U	0.00400		ma/Ka		04/22/21 10:00	04/22/21 13:41	1

mg/Kg

mg/Kg

mg/Kg

Total BTEX <0.00400 U

MB MB

<0.00200 U

<0.00400 U

Surrogate	%Recovery	Qualifier	Limits	Prepare	d Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	04/22/21 1	0:00 04/22/21 13:4	1 1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/22/21 1	0:00 04/22/21 13:4	1 1

0.00200

0.00400

0.00400

Lab Sample ID: LCS 880-2100/1-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

**Analysis Batch: 2135** 

04/22/21 10:00

04/22/21 10:00

04/22/21 10:00

Prep Type: Total/NA Prep Batch: 2100

Spike	LCS	LCS				%Rec.	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
0.100	0.08422		mg/Kg		84	70 - 130	
0.100	0.1007		mg/Kg		101	70 - 130	
0.100	0.09893		mg/Kg		99	70 - 130	
0.200	0.1969		mg/Kg		98	70 - 130	
0.100	0.09731		mg/Kg		97	70 - 130	
	Added 0.100 0.100 0.100 0.100 0.200	Added         Result           0.100         0.08422           0.100         0.1007           0.100         0.09893           0.200         0.1969	Added         Result         Qualifier           0.100         0.08422           0.100         0.1007           0.100         0.09893           0.200         0.1969	Added         Result         Qualifier         Unit           0.100         0.08422         mg/Kg           0.100         0.1007         mg/Kg           0.100         0.09893         mg/Kg           0.200         0.1969         mg/Kg	Added         Result         Qualifier         Unit         D           0.100         0.08422         mg/Kg           0.100         0.1007         mg/Kg           0.100         0.09893         mg/Kg           0.200         0.1969         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.100         0.08422         mg/Kg         84           0.100         0.1007         mg/Kg         101           0.100         0.09893         mg/Kg         99           0.200         0.1969         mg/Kg         98	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.100         0.08422         mg/Kg         84         70 - 130           0.100         0.1007         mg/Kg         101         70 - 130           0.100         0.09893         mg/Kg         99         70 - 130           0.200         0.1969         mg/Kg         98         70 - 130

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	94	70 - 130
1.4-Difluorobenzene (Surr)	112	70 - 130

Lab Sample ID: LCSD 880-2100/2-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 2100

		Spike	LCSD	LCSD				%Rec.		RPD	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
	Benzene	0.100	0.08720		mg/Kg		87	70 - 130	3	35	
	Toluene	0.100	0.09383		mg/Kg		94	70 - 130	7	35	
	Ethylbenzene	0.100	0.09142		mg/Kg		91	70 - 130	8	35	
İ	m-Xylene & p-Xylene	0.200	0.1861		mg/Kg		93	70 - 130	6	35	
	o-Xylene	0.100	0.09027		mg/Kg		90	70 - 130	8	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 890-545-1 MS

**Matrix: Solid** 

**Analysis Batch: 2135** 

Client Sample ID: BH06 Prep Type: Total/NA Prep Batch: 2100

7 manyolo Batolii 2100										op Bato.	
	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U	0.101	0.07448		mg/Kg					

Client: WSP USA Inc. Job ID: 890-545-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

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

Lab Sample ID: 890-545-1 MS Client Sample ID: BH06 **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 2135** Prep Batch: 2100

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Toluene	<0.00200	U	0.101	0.07890		mg/Kg					
Ethylbenzene	<0.00200	U	0.101	0.07660		mg/Kg					
m-Xylene & p-Xylene	<0.00399	U	0.202	0.1551		mg/Kg					
o-Xylene	<0.00200	U	0.101	0.07556		mg/Kg					
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								

4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)

Lab Sample ID: 890-545-1 MSD **Client Sample ID: BH06 Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 2135** Prep Batch: 2100

	Sample	Sample	Spike	MSD	MSD				%Rec.	•	RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0994	0.08121		mg/Kg					
Toluene	<0.00200	U	0.0994	0.08560		mg/Kg					
Ethylbenzene	<0.00200	U	0.0994	0.08466		mg/Kg					
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1666		mg/Kg					
o-Xylene	<0.00200	U	0.0994	0.08160		mg/Kg					

MSD MSD %Recovery Qualifier Limits Surrogate

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

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

Lab Sample ID: MB 880-2116/1-A Client Sample ID: Method Blank **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 2138** Prep Batch: 2116

MB MB MDL Unit Result Qualifier Analyte RL D Prepared Analyzed Dil Fac <50.0 U 50.0 04/21/21 16:46 04/22/21 12:04 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over <50.0 U 50.0 mg/Kg 04/21/21 16:46 04/22/21 12:04 C10-C28) OII Range Organics (Over C28-C36) <50.0 U 50.0 04/21/21 16:46 mg/Kg 04/22/21 12:04

Total TPH <50.0 U 50.0 04/21/21 16:46 04/22/21 12:04 mg/Kg MB MB

Surrogate %Recovery Qualifier Limits Prepared Dil Fac Analyzed 1-Chlorooctane 107 70 - 130 04/21/21 16:46 04/22/21 12:04 o-Terphenyl 99 70 - 130 04/21/21 16:46 04/22/21 12:04

Lab Sample ID: LCS 880-2116/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 2138** Prep Batch: 2116 Spike LCS LCS %Rec.

Analyte Added Result Qualifier Unit %Rec Limits 1000 1387 139 Gasoline Range Organics mg/Kg 70 - 130

(GRO)-C6-C10

Client: WSP USA Inc. Job ID: 890-545-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

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

Lab Sample ID: LCS 880-2116/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 2138** Prep Batch: 2116

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Diesel Range Organics (Over	1000	975.4		mg/Kg		98	70 - 130	
C10-C28)								

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: LCSD 880-2116/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 2138** Prep Batch: 2116

Spike LCSD LCSD %Rec. RPD Added Result Qualifier Limit Analyte Unit %Rec Limits RPD Gasoline Range Organics 1000 1281 128 70 - 130 8 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 936.8 mg/Kg 94 70 - 130 4 20

C10-C28)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	88		70 - 130

Lab Sample ID: 890-545-1 MS Client Sample ID: BH06 **Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 2138** Prep Batch: 2116

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *+ F1	998	1332		mg/Kg		129	70 - 130	
Diesel Range Organics (Over C10-C28)	<49.9	U	998	1004		mg/Kg		97	70 - 130	

MS MS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 106 70 - 130 o-Terphenyl 86 70 - 130

Client Sample ID: BH06 Lab Sample ID: 890-545-1 MSD Matrix: Solid Prep Type: Total/NA

**Analysis Batch: 2138** Prep Batch: 2116

	Sample	Sample	Spike	MSD	MSD				%Rec.	•	RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<49.9	U *+ F1	998	1489	F1	mg/Kg		145	70 - 130	11	20
(GRO)-C6-C10											
Diesel Range Organics (Over	<49.9	U	998	1033		mg/Kg		100	70 - 130	3	20
C10-C28)											

	MSD	MSD MSD					
Surrogate	%Recovery	Qualifier	Limits				
1-Chlorooctane	107		70 - 130				
o-Ternhenyl	87		70 130				

Client: WSP USA Inc.

Job ID: 890-545-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2096/1-A Client Sample ID: Method Blank

Matrix: Solid Prep Type: Soluble

Analysis Batch: 2117

	INID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	)	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			04/21/21 15:29	1

Lab Sample ID: LCS 880-2096/2-A

Client Sample ID: Lab Control Sample

Matrix: Solid

Prep Type: Soluble

Analysis Batch: 2117

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	253.2		mg/Kg		101	90 - 110	

Lab Sample ID: LCSD 880-2096/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Prep Type: Soluble

**Analysis Batch: 2117** 

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	259.0		mg/Kg		104	90 - 110	2	20

## **QC Association Summary**

Client: WSP USA Inc. Job ID: 890-545-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**GC VOA** 

Prep Batch: 2100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-545-1	BH06	Total/NA	Solid	5035	
MB 880-2100/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-545-1 MS	BH06	Total/NA	Solid	5035	
890-545-1 MSD	BH06	Total/NA	Solid	5035	

**Analysis Batch: 2135** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-545-1	BH06	Total/NA	Solid	8021B	2100
MB 880-2100/5-A	Method Blank	Total/NA	Solid	8021B	2100
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	8021B	2100
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2100
890-545-1 MS	BH06	Total/NA	Solid	8021B	2100
890-545-1 MSD	BH06	Total/NA	Solid	8021B	2100

**GC Semi VOA** 

Prep Batch: 2116

<b>Lab Sample ID</b> 890-545-1	Client Sample ID BH06	Prep Type Total/NA	Matrix Solid	Method 8015NM Prep	Prep Batch
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-545-1 MS	BH06	Total/NA	Solid	8015NM Prep	
890-545-1 MSD	BH06	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 2138** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-545-1	BH06	Total/NA	Solid	8015B NM	2116
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015B NM	2116
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2116
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2116
890-545-1 MS	BH06	Total/NA	Solid	8015B NM	2116
890-545-1 MSD	BH06	Total/NA	Solid	8015B NM	2116

**HPLC/IC** 

Leach Batch: 2096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-545-1	BH06	Soluble	Solid	DI Leach	·
MB 880-2096/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2096/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2096/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Analysis Batch: 2117** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-545-1	BH06	Soluble	Solid	300.0	2096
MB 880-2096/1-A	Method Blank	Soluble	Solid	300.0	2096
LCS 880-2096/2-A	Lab Control Sample	Soluble	Solid	300.0	2096
LCSD 880-2096/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2096

## **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-545-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

Lab Sample ID: 890-545-1 **Client Sample ID: BH06** 

Date Collected: 04/20/21 12:04 Matrix: Solid Date Received: 04/20/21 16:34

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2100	04/22/21 10:00	KL	XM
Total/NA	Analysis	8021B		1	2135	04/22/21 14:03	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 14:25	AJ	XM
Soluble	Leach	DI Leach			2096	04/21/21 12:55	CH	XM
Soluble	Analysis	300.0		1	2117	04/21/21 18:01	CH	XM

## **Laboratory References:**

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

## **Accreditation/Certification Summary**

Client: WSP USA Inc.

Job ID: 890-545-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

## Laboratory: Eurofins Xenco, Midland

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

Authority		ogram	Identification Number	Expiration Date	
Texas		ELAP	T104704400-20-21	06-30-21	
The following analytes:	are included in this report hi	it the laboratory is not certifi	ed by the governing authority. This list ma	v include analytes for	
the agency does not of	. ,	at the laboratory is not certifi	ed by the governing admonty. This list me	ay include analytes for	
0 ,	. ,	Matrix	Analyte	ay include analytes for	
the agency does not of	fer certification.	•	, , ,		

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## Method Summary

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-545-1

SDG: Lea County NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XM
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XM
300.0	Anions, Ion Chromatography	MCAWW	XM
5035	Closed System Purge and Trap	SW846	XM
8015NM Prep	Microextraction	SW846	XM
DLLeach	Deignized Water Leaching Procedure	ΔSTM	ΧM

## **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.

## Laboratory References:

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

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## Sample Summary

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-545-1

SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-545-1	BH06	Solid	04/20/21 12:04	04/20/21 16:34	- 0.5

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Project Manager: Company Name:

WOOK UNDER NOTES NAPPZH0325623

13

## Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Chain of Custody

Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199

Program:

UST/PST ☐ PRP☐ Brownfields ☐

RRC 🗆

Superfund

Work Order Comments

www.xenco.com

Xenco

**Environment Testing** 

Relinquished by: (Signature)	e Me	Project Name: 314 Project Location: 42 Project Location: 42 Sampler's Name: 52 PO #: 52 Sample Received Intact: 52 Cooler Custody Seals: 52 Total Containers: 53 Sample Quatody Seals: 53 Sample Abolo	Address:  City, State ZIP:  Phone:
ished by: (Signature)  Receix  Receix	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	SI 4 C	3300 North A: Midland, TX 79 (28) 702 - 2329
les and shall not assume any respon to each project and a charge of \$5 fc Received by: (Signature)			North A Street and TX 79705 102-2329
crisses recent from client company any responsibility for any losses rige of \$5 for each sample subm green client ().	13PPM Texas 11 Al Sb As Ba	um Around  e	Address:  City, State Zir.  Email: 105,20h, Ne
or expenses three to Euro	AI Sb /	Cont Parameters Ode	Jac.
restrices. Eurofins Xenco will be liable only for the cost of samples and subcontractors. It assigns standard terms and conditions of Eurofins Xenco will be liable only for the cost of samples and subcontractors. It assigns standard terms and conditions of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.  Reclayed by: (Signature)  Received by: (Signature)  Received by: (Signature)  Date/Time  Relinquished by: (Signature)  Relinquished by: (Signature)  Relinquished by: (Signature)  Relinquished by: (Signature)	A 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg I	TPH (EPA 8015)  BTEX (EPA 0=8021)  Chloride (EPA 3000)	hernancher@usp.com
contractors. It assigns standard terms and condi- losses are due to circumstances beyond the cor- i. These terms will be enforced unless previously- Relinquished by: (Signature)	Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zn b Mn Mo Ni Se Ag Tl U Hg: 1631/245.1/7470/7471	ANALYSIS REQUEST  890-545 Chain of Custody	Repor Delive
negotiated.  Received by: (Signature)	o Ni K Se Ag SiO <sub>2</sub> 1	ody	State of Project: Reporting: Level II Level II Deliverables: EDD
jnature) Date∕Time	Ag SiO <sub>2</sub> Na Sr Tl Sn U V Zn Hg: 1631 / 245.1 / 7470 / 7471	Preservative Codes  None: NO DI Water  Cool: Cool MeOH: Ma HCL: HC HNO 3: HN H250 4: H2 NaOH: Na H3PO 4: NABIS Na 25 20 3: NaSO 3 Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC Sample Comments	State of Project:  Reporting: Level II  Level III  PST/UST TRRP Level IV    Deliverables: EDD  ADaPT Other:
,		Codes DI Water: H <sub>2</sub> O MeOH: Me HNO <sub>3</sub> : HN NaOH: Na id: SAPC	evel IV

Work Order No:

1089 N Canal St.

**Eurofins Xenco, Carlsbad** 

# **Chain of Custody Record**

Environment Testing America

Carlsbad NM 88220 Phone 575-988-3199 Fax: 575-988-3199 Client Information (Sub Contract Lab) Client Contact: Shipping/Receiving Company Eurofins Xenco Address. 1211 W Florida Ave	Sampler Phone:  Phone: Due Date Requested 4/26/2021	Lab PM Kramer, Jessica E-Mail Jessica kramer@ Accreditation NELAP - T		Lab PM Kramer, Jessica E-Mail Jessica kramer@eurofinset Accreditations Required (SI NELAP - Texas	ler, Jessica  a kramer@eurofinset.com  Accreditations Required (See note)  NELAP - Texas  Anal	t.com See note) Analysis	Rea L	Carrier Tracking No(s).  State of Origin New Mexico  uested	y(s):
City Midland State Zip TX, 79701	TAT Requested (days)	iys)			· · · · · · · · · · · · · · · · · · ·				
Phone 432-704-5440(Tel)	PO#:			, ,.					
Email	WO#			lo)					
Project Name: Queenie 15 Federal #001H - 31403152 001	Project #: 89000048			s or N	_S_Pre				
Site:	SSOW#:			SD (Ye	015NM				
Sample Identification - Client ID (Lab ID)	Sample Date	Sample (C.	Sample Matrix Type (W-water Type S-solid, (C=comp, O-wasteld, G=grah) at-these A-air	Field Filtered S Perform MS/MS	015MOD_NM/80 021B/5035FP_C				
	V.	4	12000	X			4		
BH06 (890-545-1)	4/20/21	12 04 Mountain	Solid	×	×				
Note: Since laboratory accreditations are subject to change, Eurofins Xenco 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 Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.	C places the ownership x being analyzed the s sturn the signed Chain	of method analyte samples must be sh of Custody attestin	e & accreditation com ipped back to the Eu g to said complicance	pliance upon ou rofins Xenco LL( ) to Eurofins Xer	it subcontract I C laboratory or nco LLC	aboratories. Th	is sample shi <sub>l</sub> ns will be pro	pment is forv vided. Any c	rarded unde hanges to a
Possible Hazard Identification Unconfirmed				Samp	Sample Disposal	I (A fee may be	be asses	assessed if samples Disposal By Lab	nples are retained longer
Deliverable Requested I II III IV Other (specify)	Primary Deliverable Rank 2	able Rank 2		Speci	al Instructio	Special Instructions/QC Requirements	rements.		
Empty Kit Relinquished by		Date		Time				Method of Shipment:	nipment:
Relinquished by: () M. () H. H. 21.21	Date/Time:		Company	R	Received by			[	Date/Time:
Relinquished by	Date/Time:		Company	Re	Received by		/		Date/Time:
Relinquished by	Date/Time:			R	Received by:				Date/Time:
			Company						

## **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-545-1 SDG Number: Lea County NM

List Source: Eurofins Carlsbad

Login Number: 545 List Number: 1 Creator: Clifton, Cloe

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	

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## **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-545-1 SDG Number: Lea County NM

List Source: Eurofins Midland

List Creation: 04/21/21 02:58 PM

Login Number: 545 List Number: 2

Creator: Copeland, Tatiana

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	
s 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 <a href="fam:40mm">6mm</a> (1/4").	True	

Released to Imaging: 8/10/2021 2:03:58 PM



## **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-547-1

Laboratory Sample Delivery Group: Lea County NM

Client Project/Site: Queenie 15 Federal #001H - 31403152.001

For:

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

Attn: Joseph Hernandez

JURAMER

Authorized for release by: 4/23/2021 3:26:29 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

.....LINKS

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 8/10/2021 2:03:58 PM

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.

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Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H - 31403152.001 Laboratory Job ID: 890-547-1 SDG: Lea County NM

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## **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-547-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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

**HPLC/IC** 

Qualifier **Qualifier Description** 

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

Detection Limit (DoD/DOE) DΙ

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 Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NFG 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)

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

## **Case Narrative**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-547-1

SDG: Lea County NM

Job ID: 890-547-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-547-1

## Receipt

The samples were received on 4/20/2021 4:34 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°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

Method 8015MOD\_NM: The laboratory control sample (LCS) for preparation batch 880-2116 and analytical batch 880-2138 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10>. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-547-1 SDG: Lea County NM

**Client Sample ID: BH07** 

Date Collected: 04/20/21 13:18 Date Received: 04/20/21 16:34

Sample Depth: - 0.5

Lab Sample ID: 890-547-1 Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 14:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 14:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 14:24	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 14:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				04/22/21 10:00	04/22/21 14:24	1
1,4-Difluorobenzene (Surr)	119		70 - 130				04/22/21 10:00	04/22/21 14:24	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC) Analyte Result Qualifier RL MDL Unit Analyzed Dil Fac Prepared <49.9 U\*+ 04/22/21 16:09 Gasoline Range Organics 49.9 mg/Kg 04/21/21 16:46 (GRO)-C6-C10 Diesel Range Organics (Over <49.9 U 49.9 mg/Kg 04/21/21 16:46 04/22/21 16:09 C10-C28) OII Range Organics (Over C28-C36) 49.9 04/21/21 16:46 04/22/21 16:09 <49.9 U mg/Kg Total TPH <49.9 U 49.9 mg/Kg 04/21/21 16:46 04/22/21 16:09 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1-Chlorooctane 118 70 - 130 04/21/21 16:46 04/22/21 16:09 o-Terphenvl 70 - 130 04/21/21 16:46 04/22/21 16:09 107

_ ro.p.ro.ry.		70 .00			·		0 11 22 2 7 1 0 1 0 0	•
Method: 300.0 - Anions, Ion Chrom	atography - So	luble						
Analyte	Result Q	ualifier RL	MDL	Unit I	D	Prepared	Analyzed	Dil Fac
Chloride	356	4.99		mg/Kg			04/23/21 02:07	1

Client Sample ID: BH07 Date Collected: 04/20/21 13:23 Date Received: 04/20/21 16:34

Sample Depth: - 1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/22/21 10:00	04/22/21 14:44	
Toluene	<0.00199	U	0.00199		mg/Kg		04/22/21 10:00	04/22/21 14:44	•
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/22/21 10:00	04/22/21 14:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/22/21 10:00	04/22/21 14:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/22/21 10:00	04/22/21 14:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/22/21 10:00	04/22/21 14:44	1
Total BTEX	<0.00398	U	0.00398		mg/Kg		04/22/21 10:00	04/22/21 14:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				04/22/21 10:00	04/22/21 14:44	1
1,4-Difluorobenzene (Surr)	112		70 <sub>-</sub> 130				04/22/21 10:00	04/22/21 14:44	1

Lab Sample ID: 890-547-2

**Matrix: Solid** 

## **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-547-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Client Sample ID: BH07 Lab

Lab Sample ID: 890-547-2 Matrix: Solid

Date Received: 04/20/21 16:34 Sample Depth: - 1

Date Collected: 04/20/21 13:23

Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+	50.0		mg/Kg		04/21/21 16:46	04/22/21 16:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 16:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 16:30	1
Total TPH	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 16:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130				04/21/21 16:46	04/22/21 16:30	1
o-Terphenyl	89		70 - 130				04/21/21 16:46	04/22/21 16:30	1
- Method: 300.0 - Anions, Ion Chro	matography -	Soluble							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.80		4.99		mg/Kg			04/23/21 02:13	1

## **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-547-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

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)	
890-547-1	BH07	110	119	
890-547-2	BH07	105	112	
LCS 880-2100/1-A	Lab Control Sample	94	112	
LCSD 880-2100/2-A	Lab Control Sample Dup	90	102	
MB 880-2100/5-A	Method Blank	112	100	
Surrogate Legend				
BFB = 4-Bromofluorobe	nzene (Surr)			
DFBZ = 1.4-Difluoroben	zene (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)	
890-547-1	BH07	118	107	
890-547-2	BH07	96	89	
LCS 880-2116/2-A	Lab Control Sample	110	91	
LCSD 880-2116/3-A	Lab Control Sample Dup	107	88	
MB 880-2116/1-A	Method Blank	107	99	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc. Job ID: 890-547-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2100/5-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2100

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	
Toluene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112	70 - 130	04/22/21 10:00	04/22/21 13:41	1
1,4-Difluorobenzene (Surr)	100	70 - 130	04/22/21 10:00	04/22/21 13:41	1

Lab Sample ID: LCS 880-2100/1-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 2100

	Spike	LCS	LCS			%Rec.	
Analyte	Added	Result	Qualifier	Unit	D %Rec	Limits	
Benzene	0.100	0.08422		mg/Kg	84	70 - 130	
Toluene	0.100	0.1007	ĺ	mg/Kg	101	70 - 130	
Ethylbenzene	0.100	0.09893	I	mg/Kg	99	70 - 130	
m-Xylene & p-Xylene	0.200	0.1969		mg/Kg	98	70 - 130	
o-Xylene	0.100	0.09731	1	mg/Kg	97	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifie	er Limits
4-Bromofluorobenzene (Surr)	94	70 - 130
1.4-Difluorobenzene (Surr)	112	70 - 130

Lab Sample ID: LCSD 880-2100/2-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 2100

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08720		mg/Kg		87	70 - 130	3	35
Toluene	0.100	0.09383		mg/Kg		94	70 - 130	7	35
Ethylbenzene	0.100	0.09142		mg/Kg		91	70 - 130	8	35
m-Xylene & p-Xylene	0.200	0.1861		mg/Kg		93	70 - 130	6	35
o-Xylene	0.100	0.09027		mg/Kg		90	70 - 130	8	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1.4-Difluorobenzene (Surr)	102		70 <sub>-</sub> 130

Client: WSP USA Inc. Job ID: 890-547-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

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

Lab Sample ID: MB 880-2116/1-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2116

ı		MB	MB							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
	(GRO)-C6-C10									
	Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
	C10-C28)									
	OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
	Total TPH	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1

мв мв

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04	4/21/21 16:46	04/22/21 12:04	1
o-Terphenyl	99		70 - 130	04	4/21/21 16:46	04/22/21 12:04	1

Lab Sample ID: LCS 880-2116/2-A

Matrix: Solid

**Analysis Batch: 2138** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 2116

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1387 139 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 975.4 mg/Kg 98 70 - 130

C10-C28)

LCS LCS %Recovery Qualifier Surrogate Limits 1-Chlorooctane 110 70 - 130 o-Terphenyl 91 70 - 130

Lab Sample ID: LCSD 880-2116/3-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client	Sample	ID: Lab	Control	Sample	Dun
Ollelit	Januare	ID. Lab	COLLIGOR	Jailible	Dub

Prep Type: Total/NA

Prep Batch: 2116

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1281		mg/Kg		128	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	1000	936.8		mg/Kg		94	70 - 130	4	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	88		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2178/1-A

**Matrix: Solid** 

**Analysis Batch: 2181** 

Client Sample ID: Method Blank

**Prep Type: Soluble** 

MB MB

Analyte Result Qualifier RL MDL Unit D Dil Fac Prepared Analyzed Chloride 5.00 <5.00 U mg/Kg 04/22/21 23:56

Client: WSP USA Inc. Job ID: 890-547-1 Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-2178/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2181** 

		Spike	LCS	LCS				%Rec.	
Analyte	,	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride		250	253.2		mg/Kg		101	90 - 110	

Lab Sample ID: LCSD 880-2178/3-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 2181** 

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	250	260.0	-	mg/Kg		104	90 - 110	3	20

## **QC Association Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-547-1

SDG: Lea County NM

**GC VOA** 

Prep Batch: 2100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-547-1	BH07	Total/NA	Solid	5035
890-547-2	BH07	Total/NA	Solid	5035
MB 880-2100/5-A	Method Blank	Total/NA	Solid	5035
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	5035
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	5035

**Analysis Batch: 2135** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-547-1	BH07	Total/NA	Solid	8021B	2100
890-547-2	BH07	Total/NA	Solid	8021B	2100
MB 880-2100/5-A	Method Blank	Total/NA	Solid	8021B	2100
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	8021B	2100
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2100

**GC Semi VOA** 

Prep Batch: 2116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-547-1	BH07	Total/NA	Solid	8015NM Prep	
890-547-2	BH07	Total/NA	Solid	8015NM Prep	
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 2138** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-547-1	BH07	Total/NA	Solid	8015B NM	2116
890-547-2	BH07	Total/NA	Solid	8015B NM	2116
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015B NM	2116
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2116
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2116

**HPLC/IC** 

Leach Batch: 2178

<b>Lab Sample ID</b> 890-547-1	Client Sample ID BH07	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
890-547-2	BH07	Soluble	Solid	DI Leach	
MB 880-2178/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Analysis Batch: 2181** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-547-1	BH07	Soluble	Solid	300.0	2178
890-547-2	BH07	Soluble	Solid	300.0	2178
MB 880-2178/1-A	Method Blank	Soluble	Solid	300.0	2178
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	300.0	2178
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2178

Eurofins Xenco, Carlsbad

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## **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-547-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

Lab Sample ID: 890-547-1 **Client Sample ID: BH07** 

Date Collected: 04/20/21 13:18 Matrix: Solid Date Received: 04/20/21 16:34

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2100	04/22/21 10:00	KL	XM
Total/NA	Analysis	8021B		1	2135	04/22/21 14:24	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 16:09	AJ	XM
Soluble	Leach	DI Leach			2178	04/22/21 17:45	СН	XM
Soluble	Analysis	300.0		1	2181	04/23/21 02:07	WP	XM

**Client Sample ID: BH07** Lab Sample ID: 890-547-2

Date Collected: 04/20/21 13:23 Date Received: 04/20/21 16:34

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			2100	04/22/21 10:00	KL	XM
Total/NA	Analysis	8021B		1	2135	04/22/21 14:44	KL	XM
Total/NA	Prep	8015NM Prep			2116	04/21/21 16:46	DM	XM
Total/NA	Analysis	8015B NM		1	2138	04/22/21 16:30	AJ	XM
Soluble	Leach	DI Leach			2178	04/22/21 17:45	CH	XM
Soluble	Analysis	300.0		1	2181	04/23/21 02:13	WP	XM

Laboratory References:

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

**Matrix: Solid** 

## **Accreditation/Certification Summary**

Client: WSP USA Inc.

Job ID: 890-547-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

## Laboratory: Eurofins Xenco, Midland

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

Authority		ogram	Identification Number	<b>Expiration Date</b>
Texas	s NELAP		T104704400-20-21	06-30-21
The following analytes	are included in this report, bu	t the laboratory is not certifi	ied by the governing authority. This list ma	av include analytes for wh
the agency does not off		,	ica sy the gerenning addition, the notine	ay molade analytes for wi
the agency does not off Analysis Method		Matrix	Analyte	ay molade unarytes for wi
0 ,	fer certification.	•	, , ,	

## **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-547-1

SDG: Lea County NM

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

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## **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.

## Laboratory References:

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

## Sample Summary

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-547-1

SDG: Lea County NM

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-547-1	BH07	Solid	04/20/21 13:18	04/20/21 16:34	- 0.5
890-547-2	BH07	Solid	04/20/21 13:23	04/20/21 16:34	- 1

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eurofins

Xenco

Environment Testing

Joseph Hernanchz

## **Chain of Custody**

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-333 EL Paso, TX (915) 585-3443, Lubbock Hobbs, NM (575) 392-7550, Carlsbad,

o, TX (210) 509-3334	Work Order No:
TX (806) 794-1296	
NM (575) 988-3199	
	www.xenco.com Page of of
	Work Order Comments
	Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐
	State of Project:
	]

Date 08050000 Day 2020 2			0		a a		5
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Date/Time	re) Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Received	y: (Signature)	Relinquished by: (Signature)
	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expanses incurred by the client if such losses are due to circumstances beyond the control of the cont	curred by the client if such losses are enco, but not analyzed. These terms v	for any losses or expenses in ample submitted to Eurofins X	hall not assume any responsibility oject and a charge of \$5 for each s	or the cost of samples and s	nco will be liable only for immum charge of \$85.0	of Eurofins Xenco. A mi
conditions	CLP / SPLP 6010: BRCKA SD AS BA BE CO CF CO CU PD IVID IVID IVID IVID IVID IVID IVID I	CG CF CO CU PD WIN IVIO W	ient company to Furofins Xen	THE SHALL BOTO: BRCKA	e analyzed	and Metal(s) to be	Notice: Signature of this decrepant and religiously house a religiously house and religi
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			/	318 0.51	S 4/20/21 1	7(	3H07
Sample Comments			con s TP BT Ch	Time Depth Comp C	Matrix Date Sampled S	ntification	Sample Identification
NaUH+ASCOFDIC ACID: SAFC	Zac		EX	perature: Z-0	Corrected Temperature:		Total Containers:
Zn Acetate+NaOH: Zn	Claim of Custody	- 14/ Cildin	((		N/A Temperature Reading:	als: Yes No	Sample Custody Seals
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>		` —	P, EP	stor: -0,2	N/A Correction Factor:	als: Yes Na	Cooler Custody Seals:
NaHSO₄: NABIS	Nat		4 · 'A	EO: MM 20-3	No Thermometer ID:		Samples Received Intact
H <sub>3</sub> PO <sub>4</sub> : HP	H <sub>3</sub> P			Wet Ice: Yes No	keg No	IPT Temp Blank:	SAMPLE RECEIPT
H <sub>2</sub> S0 <sub>4</sub> : H <sub>2</sub> NaOH: Na	H <sub>2</sub> S		) = Q	the lab, if received by 4:30pm			PO#:
HCL: HC HNO3: HN	HCI		02	AT starts the day received by		Latima Smith	Sampler's Name:
Cool: Cool MeOH: Me	Coo		) 2i)	Due Date:		Lea count	Project Location:
None: NO DI Water: H <sub>2</sub> O	Non		Pres. Code			31403152.001	Project Number:
Preservative Codes	JEST	ANALYSIS REQUEST		Turn Around	QUOONIO IS FEDERAL# OCH	O Woonio is	Project Name:
Other:	Deliverables: EDD		nernanclez@usp.com	Email: 10500h. he	- 2329	(28) 702-	Phone:
ST   TRRP   Level IV	Reporting: Level III Level III PST/UST TRRP		<b>→</b>	City, State ZIP:	IX	Midlanc	City, State ZIP:
]	State of Project:			Q Address.	North A Stree-	Ο,	Address:
lds RRC Superfund	Program: UST/PST 🗌 PRP 🗌 Brownfields 📗 RRC 📗 Superfund 📗			Company Name:	SA	NOD IX	Company Name:

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

# **Chain of Custody Record**

Environment Testing America

	Sampler			Lab PM	S	l	İ		l		Carrier Tracking No(s):	racking	No(s)		ı	_	COC No:	ö		1		ı			890-177 1
Client Information (Sub Contract Lab)				Kran	Kramer, Jessica	8				L						Ļ	99	77 1	l			l			
Shipping/Receiving	Fnone			jessic	բ-ман jessica kramer@eurofinset co	ne@en	rofins	et com		<del>-</del> "	State of Origin New Mexico	Origin:					Page: Page	₫ 	_						Page 1 of 1
Company: Eurofins Xenco					Accreditations Required (See NELAP - Texas	ons Re Texa	quired IS	(See note)	٣								3-068 # 90-	547-1			l				Job#: 890-547-1
Address. 1211 W Florida Ave	Due Date Requested 4/26/2021	a.						Ana	nalysis	Requested	este	۵	I				rese	vati	ရ ဂ	des	l				on Codes
City Midland	TAT Requested (days)	/s)				$\dashv$			$\dashv$			$\dashv$	$\neg$			Sedichi.	0 B A	를 할 는	Ď	) Z Z		i a an			HCL - NaOH Zn Acetate
State, Zip: TX, 79701																		tric Ac	T E	ຄື	Na.	048 2803			Nitric Acid P
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Email	WO#				lo)		·									all the first term		Wate	7		M A	AA	j		Ice U DI Water V
Project Name: Queenie 15 Federal #001H - 31403152 001	Project #: 89000048				s or l											20000		OT A		ν <	운 모	4-5 er (spe	cify)		EDTA W
Site:	SSOW#:				SD (Ye											Fartiller (1906)	Other								Other -
		Sample	Sample Type (C=comp,	Matrix (W=water S=solid, O=waste/oli,	old Filtered S	D_ORGFM_28 	21B/5036FP_C									tal Number					Ì				
Comple (Control Control  Sample Date		Preserval	Preservation Code:	X P	477			-		1	1		September 1		(T		op.	Cla	Insu	ncri ucri	ons	Vote.	A CONTRACTOR	Special instructions/Note.	
ВН07 (890-547-1)	4/20/21	13 18 Mountain		Solid		×	×	00 m	A CONTRACTOR			i de	Subsu-ski	1112 1121	, and	-)		T T T T T	27.75					The second of	
ВН07 (890-547-2)	4/20/21	13 23 Mountain		Solid		×	×									4									
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Note: Since laboratory accreditations are subject to change, Eurofins Xenco 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 Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brough to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.	places the ownership being analyzed the signed Chain or	of method an amples must but Custody atte	alyte & accred e shipped bac esting to said c	itation complia k to the Eurofir omplicance to	nce upon o Is Xenco LL Eurofins Xe	ut subc _C labo ;nco LL	ontract ratory	laborato or other in	ries. Thi nstruction	s sampl าร will b	e shipm e provic	entis i	orward ly char	ed und	der ch accre	ain-or ditati	-custo	tus sh	the la	borat e bro	ory do ught t	xes no o Euro	t currei fins Xe	ntly	custody If the laboratory does not currently n status should be brought to Eurofins Xenco
Possible Hazard Identification Unconfirmed					Sam	ple D	ispos Im To	Sample Disposal ( A fee		may be assessed if samples Disposal By Lab	<b>assessed if san</b> Disposal By Lab	ed if s	amp ab	es aı	∐e re	tain: Arch	ve F	nger or_	tha	11 11	Mo	h) inths			are retained longer than 1 month)  Archive For Months
Deliverable Requested I II III IV Other (specify)	Primary Deliverable Rank	ıble Rank 2	10		Spec	Special Instructions/0	structi	ons/QC	ນC Requirements	remen	Ś												İ		
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Custody Seals Intact Custody Seal No					0	boler 1	èmper	Cooler Temperature(s) °C and Other Remarks	C and O	ther Re	narks.														Company
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## **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-547-1 SDG Number: Lea County NM

List Source: Eurofins Carlsbad Login Number: 547

List Number: 1 Creator: Clifton, Cloe

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: 890-547-1

SDG Number: Lea County NM

List Source: Eurofins Midland List Creation: 04/21/21 02:59 PM

Creator: Copeland, Tatiana

Login Number: 547 List Number: 2

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	True	

**Eurofins Carlsbad** 

Released to Imaging: 8/10/2021 2:03:58 PM

<6mm (1/4").

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## **Environment Testing America**

#### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-548-1

Laboratory Sample Delivery Group: Lea County NM

Client Project/Site: Queenie 15 Federal #001H - 31403152.001

For:

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

Attn: Joseph Hernandez

JURAMER

Authorized for release by: 4/23/2021 3:28:37 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

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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.

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Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H - 31403152.001 Laboratory Job ID: 890-548-1 SDG: Lea County NM

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#### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-548-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

Indicates the analyte was analyzed for but not detected.

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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

**HPLC/IC** 

Qualifier **Qualifier Description** 

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

Detection Limit (DoD/DOE) DL

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 Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NFG 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)

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

#### **Case Narrative**

Client: WSP USA Inc.

Job ID: 890-548-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

Job ID: 890-548-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-548-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 4/20/2021 4:34 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 was 2.0° C.

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

#### GC Semi VOA

Method 8015B NM: The laboratory control sample (LCS) for preparation batch 880-2116 and analytical batch 880-2138 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10>. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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.

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

#### **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-548-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**Client Sample ID: BH08** Lab Sample ID: 890-548-1 Date Collected: 04/20/21 12:32 Matrix: Solid

Date Received: 04/20/21 16:34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		04/22/21 10:00	04/22/21 15:05	1
Toluene	<0.00198	U	0.00198		mg/Kg		04/22/21 10:00	04/22/21 15:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		04/22/21 10:00	04/22/21 15:05	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		04/22/21 10:00	04/22/21 15:05	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		04/22/21 10:00	04/22/21 15:05	1
Xylenes, Total	< 0.00396	U	0.00396		mg/Kg		04/22/21 10:00	04/22/21 15:05	1
Total BTEX	<0.00396	U	0.00396		mg/Kg		04/22/21 10:00	04/22/21 15:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
			70 - 130				04/22/21 10:00	04/22/21 15:05	
4-Bromofluorobenzene (Surr)	101		10 - 130				0 1/22/27 10:00		
1,4-Difluorobenzene (Surr)	113	BO) (CC)	70 - 130 70 - 130				04/22/21 10:00	04/22/21 15:05	1
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang	113 ge Organics (DI		70 - 130	MDI	Unit	D	04/22/21 10:00	04/22/21 15:05	Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics	113 ge Organics (DI	Qualifier		MDL	Unit mg/Kg	<u>D</u>			Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10	ge Organics (DI Result <50.0	Qualifier U *+	70 - 130  RL 50.0	MDL	mg/Kg	<u>D</u>	04/22/21 10:00  Prepared  04/21/21 16:46	04/22/21 15:05  Analyzed  04/22/21 16:51	Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	113 ge Organics (DI Result	Qualifier U *+	70 - 130 RL	MDL		<u>D</u>	04/22/21 10:00 Prepared	04/22/21 15:05 Analyzed	1 Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10	ge Organics (DI Result <50.0	Qualifier U *+	70 - 130  RL 50.0	MDL	mg/Kg	<u>D</u>	04/22/21 10:00  Prepared  04/21/21 16:46	04/22/21 15:05  Analyzed  04/22/21 16:51	1
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	113 ge Organics (DI Result <50.0 <50.0	Qualifier U *+ U	70 - 130  RL 50.0	MDL	mg/Kg	<u>D</u>	04/22/21 10:00  Prepared  04/21/21 16:46  04/21/21 16:46	04/22/21 15:05  Analyzed 04/22/21 16:51 04/22/21 16:51	1
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH	113 ge Organics (DI Result <50.0 <50.0 <50.0	Qualifier U*+ U U	70 - 130  RL 50.0  50.0	MDL	mg/Kg mg/Kg mg/Kg	<u>D</u>	04/22/21 10:00  Prepared 04/21/21 16:46 04/21/21 16:46	04/22/21 15:05  Analyzed 04/22/21 16:51 04/22/21 16:51	Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)	113  ge Organics (Di Result <50.0 <50.0 <50.0 <50.0	Qualifier U*+ U U	70 - 130  RL 50.0  50.0  50.0  50.0	MDL	mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 04/21/21 16:46 04/21/21 16:46 04/21/21 16:46 04/21/21 16:46	Analyzed 04/22/21 16:51 04/22/21 16:51 04/22/21 16:51 04/22/21 16:51	1 1 1

**Client Sample ID: BH08** Lab Sample ID: 890-548-2 Date Collected: 04/20/21 12:48 **Matrix: Solid** 

RL

4.97

MDL Unit

mg/Kg

D

Prepared

Result Qualifier

271

Date Received: 04/20/21 16:34

Analyte

Chloride

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 15:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 15:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 15:26	1
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 15:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130				04/22/21 10:00	04/22/21 15:26	1
1,4-Difluorobenzene (Surr)	111		70 - 130				04/22/21 10:00	04/22/21 15:26	1
- Method: 8015B NM - Diesel R	ange Organics (D	RO) (GC)							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *+	50.0		mg/Kg		04/21/21 16:46	04/22/21 17:15	1

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Dil Fac

Analyzed

04/23/21 02:18

#### **Client Sample Results**

Client: WSP USA Inc.

Job ID: 890-548-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Client Sample ID: BH08

Lab Sample ID: 890-548-2

Analyzed

04/23/21 02:23

Prepared

D

Matrix: Solid

Date Collected: 04/20/21 12:48 Date Received: 04/20/21 16:34

Analyte

Chloride

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC) (	Continued)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 17:15	1
C10-C28) OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 17:15	1
Total TPH	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Juli eguie	, or to co . o. j			,u., _ cu	
1-Chlorooctane	109	70 - 130	04/21/21 16:46	04/22/21 17:15	1
o-Terphenyl	99	70 - 130	04/21/21 16:46	04/22/21 17:15	1
Method: 300.0 - Anions, Ion Chron	natography - Soluble				

RL

4.96

MDL Unit

mg/Kg

Result Qualifier

21.6

9

10

Dil Fac

12

13

#### **Surrogate Summary**

Client: WSP USA Inc.

Job ID: 890-548-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Rec
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-548-1	BH08	101	113	
890-548-2	BH08	101	111	
LCS 880-2100/1-A	Lab Control Sample	94	112	
LCSD 880-2100/2-A	Lab Control Sample Dup	90	102	
MB 880-2100/5-A	Method Blank	112	100	
Surrogate Legend				
BFB = 4-Bromofluorobenzen	e (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)	
890-548-1	BH08	94	85	
890-548-2	BH08	109	99	
LCS 880-2116/2-A	Lab Control Sample	110	91	
LCSD 880-2116/3-A	Lab Control Sample Dup	107	88	
MB 880-2116/1-A	Method Blank	107	99	

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

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Client: WSP USA Inc. Job ID: 890-548-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-2100/5-A

**Matrix: Solid Analysis Batch: 2135**  Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2100

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	
Toluene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	•
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/22/21 10:00	04/22/21 13:41	
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	
Total BTEX	<0.00400	U	0.00400		mg/Kg		04/22/21 10:00	04/22/21 13:41	

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130	04/22/21 10:00	04/22/21 13:41	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/22/21 10:00	04/22/21 13:41	1

Lab Sample ID: LCS 880-2100/1-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 2100

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit %Rec Limits Benzene 0.100 0.08422 mg/Kg 84 70 - 130 0.100 Toluene 0.1007 mg/Kg 101 70 - 130 0.100 0.09893 70 - 130 Ethylbenzene mg/Kg 99 0.200 0.1969 70 - 130 m-Xylene & p-Xylene mg/Kg 98 o-Xylene 0.100 0.09731 mg/Kg 97 70 - 130

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	94	70 - 130
1.4-Difluorobenzene (Surr)	112	70 - 130

Lab Sample ID: LCSD 880-2100/2-A

**Matrix: Solid** 

**Analysis Batch: 2135** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 2100

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Benzene 0.100 0.08720 mg/Kg 87 70 - 130 3 35 Toluene 0.100 0.09383 mg/Kg 94 70 - 130 35 Ethylbenzene 0.100 0.09142 mg/Kg 91 70 - 130 8 35 0.200 35 m-Xylene & p-Xylene 0.1861 mg/Kg 93 70 - 130 6 0.100 0.09027 90 70 - 130 o-Xylene mg/Kg 35

LCSD LCSD

Surrogate	%Recovery Qualit	fier Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Eurofins Xenco, Carlsbad

Job ID: 890-548-1 Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

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

Lab Sample ID: MB 880-2116/1-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 2116

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
(GRO)-C6-C10									
Diesel Range Organics (Over	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
C10-C28)									
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1
Total TPH	<50.0	U	50.0		mg/Kg		04/21/21 16:46	04/22/21 12:04	1

мв мв

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130	04/21/21 16:4	6 04/22/21 12:04	1
o-Terphenyl	99		70 - 130	04/21/21 16:4	6 04/22/21 12:04	1

Lab Sample ID: LCS 880-2116/2-A

Matrix: Solid

**Analysis Batch: 2138** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 2116

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits Gasoline Range Organics 1000 1387 \*+ 139 70 - 130 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 975.4 mg/Kg 98 70 - 130

C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	110		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: LCSD 880-2116/3-A

**Matrix: Solid** 

**Analysis Batch: 2138** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 2116

-	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	 1000	1281		mg/Kg		128	70 - 130	8	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	936.8		mg/Kg		94	70 - 130	4	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	107		70 - 130
o-Terphenyl	88		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-2178/1-A

**Matrix: Solid** 

**Analysis Batch: 2181** 

Client Sample ID: Method Blank

**Prep Type: Soluble** 

MB MB

Analyte Result Qualifier RL MDL Unit D Prepared Dil Fac Analyzed <5.00 U Chloride 5.00 mg/Kg 04/22/21 23:56

Lab Sample ID: LCS 880-2178/2-A

#### **QC Sample Results**

Client: WSP USA Inc. Job ID: 890-548-1 Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

**Client Sample ID: Lab Control Sample** 

**Prep Type: Soluble** 

**Matrix: Solid Analysis Batch: 2181** 

Spike LCS LCS %Rec. Added Result Qualifier Analyte Unit %Rec Limits Chloride 250 253.2 mg/Kg 101 90 - 110

Lab Sample ID: LCSD 880-2178/3-A

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 2181** 

Spike LCSD LCSD %Rec. RPD Added Result Qualifier Limits RPD Limit Analyte Unit D %Rec Chloride 250 260.0 mg/Kg 104 90 - 110 3 20

#### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-548-1

Project/Site: Queenie 15 Federal #001H - 31403152.001

SDG: Lea County NM

GC VOA

Prep Batch: 2100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-548-1	BH08	Total/NA	Solid	5035
890-548-2	BH08	Total/NA	Solid	5035
MB 880-2100/5-A	Method Blank	Total/NA	Solid	5035
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	5035
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	5035

**Analysis Batch: 2135** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-548-1	BH08	Total/NA	Solid	8021B	2100
890-548-2	BH08	Total/NA	Solid	8021B	2100
MB 880-2100/5-A	Method Blank	Total/NA	Solid	8021B	2100
LCS 880-2100/1-A	Lab Control Sample	Total/NA	Solid	8021B	2100
LCSD 880-2100/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	2100

**GC Semi VOA** 

Prep Batch: 2116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-548-1	BH08	Total/NA	Solid	8015NM Prep	
890-548-2	BH08	Total/NA	Solid	8015NM Prep	
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

**Analysis Batch: 2138** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-548-1	BH08	Total/NA	Solid	8015B NM	2116
890-548-2	BH08	Total/NA	Solid	8015B NM	2116
MB 880-2116/1-A	Method Blank	Total/NA	Solid	8015B NM	2116
LCS 880-2116/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	2116
LCSD 880-2116/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	2116

**HPLC/IC** 

Leach Batch: 2178

<b>Lab Sample ID</b> 890-548-1	Client Sample ID BH08	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
890-548-2	BH08	Soluble	Solid	DI Leach	
MB 880-2178/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Analysis Batch: 2181** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-548-1	BH08	Soluble	Solid	300.0	2178
890-548-2	BH08	Soluble	Solid	300.0	2178
MB 880-2178/1-A	Method Blank	Soluble	Solid	300.0	2178
LCS 880-2178/2-A	Lab Control Sample	Soluble	Solid	300.0	2178
LCSD 880-2178/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	2178

Eurofins Xenco, Carlsbad

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Acrico, Garisba

#### Lab Chronicle

Client: WSP USA Inc. Job ID: 890-548-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

**Client Sample ID: BH08** 

Date Received: 04/20/21 16:34

Lab Sample ID: 890-548-1 Date Collected: 04/20/21 12:32

**Matrix: Solid** 

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab 5035 XM Total/NA Prep 2100 04/22/21 10:00 KL Total/NA Analysis 8021B 1 2135 04/22/21 15:05 KL ΧM Total/NA Prep 8015NM Prep 2116 04/21/21 16:46 DM ΧM Total/NA Analysis 8015B NM 1 2138 04/22/21 16:51 AJXMSoluble Leach DI Leach 2178 04/22/21 17:45 СН ΧM Soluble Analysis 300.0 1 2181 04/23/21 02:18 WP ΧM

**Client Sample ID: BH08** Lab Sample ID: 890-548-2 Date Collected: 04/20/21 12:48 Matrix: Solid

Date Received: 04/20/21 16:34

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Lab Total/NA Prep 5035 2100 04/22/21 10:00 KL XM Total/NA 8021B 2135 04/22/21 15:26 XM Analysis 1 KL Total/NA ΧM Prep 8015NM Prep 2116 04/21/21 16:46 DM Total/NA 8015B NM Analysis 1 2138 04/22/21 17:15 AJXMSoluble Leach DI Leach 2178 04/22/21 17:45 СН ΧM Soluble Analysis 300.0 1 2181 04/23/21 02:23 WP XM

Laboratory References:

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

#### **Accreditation/Certification Summary**

Client: WSP USA Inc. Job ID: 890-548-1 Project/Site: Queenie 15 Federal #001H - 31403152.001 SDG: Lea County NM

#### Laboratory: Eurofins Xenco, Midland

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

Authority	Pr	ogram	Identification Number	<b>Expiration Date</b>
Texas	NE	ELAP	T104704400-20-21	06-30-21
The following analytes:	are included in this report his	t the laboratory is not certific	ed by the governing authority. This list ma	av include analytes for
the agency does not of	· '	t the laboratory to not contin	ed by the governing additionty. This list me	ay include analytes for
0 ,	· '	Matrix	Analyte	ay include analytes for
the agency does not of	fer certification.	,	, , ,	

#### **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-548-1

SDG: Lea County NM

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

#### **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.

#### Laboratory References:

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

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#### **Sample Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H - 31403152.001

Job ID: 890-548-1

SDG: Lea County NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
890-548-1	BH08	Solid	04/20/21 12:32	04/20/21 16:34	
890-548-2	BH08	Solid	04/20/21 12:48	04/20/21 16:34	

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Total 200.7 / 6010

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Revised Date: 08/25/2020 Rev. 2020.2

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# Chain of Custody

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

Work Order No:

K Se Ag SiO, Na Sr Ti Sn U V Zn  Hg: 1631 / 245.1 / 7470 / 7471  terms and conditions ces beyond the control less previously negotiated.	ns sta	losses or expenses incurred by the clie submitted to Eurofins Xenco, but not an	urchase order from client column me any responsibility for any harge of \$5 for each sample :	ment or samples consutures a value, the cost of samples and shall not assively be applied to each project and a c	liable only for arge of \$85.00
	$\  \ _{k}$	npany to Eurofins Xenco, its affiliates as			t and relinquis
	Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	Sb As Ba Be Cd Cr Co Cu	TCLP / SPLP 6010: 8RCRA S		etal(s) to be analyzed
	Cu Fe Pb Mg Mn Mo Ni	As Ba Be B Cd Ca Cr Co	oM Texas 11 Al Sb	0: 8RCRA 13PPM	200.8 / 6020
			/		
			/		
				Z	
				X 4 /	
		/	-	3/20/21 1248	64
			0.50	S 4/20/21 1232	
Sample Comments		BTI	Depth Grab/ # of Comp Cont	Matrix Date Time Sampled Sampled	tion
NaOH+Ascorbic Acid: SAPC	890-548 Chain of Custody	ond	7.0	N/A Temperature Reading:  Corrected Temperature:	Yes \Ng
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> : NaSO <sub>3</sub>		ē (†			3
H <sub>3</sub> PO <sub>4</sub> : HP NaHSO <sub>4</sub> : NABIS		801 4 0= EPA	No No naramete	k: Yes No Wet Ice: Thermometer ID:	Temp Blank:
H <sub>2</sub> SO <sub>4</sub> : H <sub>2</sub> NaOH: Na		(S) (802 (800) (800)		h	hma End
<u>_</u>		21)		Due Date:	damp ?
None: NO DI Water: H <sub>2</sub> O			Rush Code	(X) (X)Routine	403152
Preservative Codes	ANALYSIS REQUEST	Ah	Turn Around	Anne 15 Federal # CO1H Turn	N IS E
DD ADaPT Other:	Deliverables: EDD	JOKE (M. M. COM)	Joseph hernandez@us	2329 Email:	81) 702-2329
Reporting: Level III Devel III PST/UST TRRP Level IV	Reporting: Level II		City, State ZIP:	X	idland
:: 	State of Project:		Address.	Worth A Street -	2
Program: UST/PST ☐ PRP☐ Brownfields ☐ RRC ☐ Superfund ☐	Program: UST/PS		Company Name:	1	A
Work Order Comments			Bill to: (ir different)	ternanciez -	seph I

SAMPLE RECEIPT

Samples Received Intact:
Cooler Custody Seals:

ample Custody Seals:

Fotal Containers:

Sample Identifica

80F108

Sampler's Name:

Project Name:
Project Number:
Project Location:

Phone:

City, State ZIP:

Address:

Project Manager: Company Name:

1089 N Canal St.

Carlsbad, NM 88220 Phone 575-988-3199 Fax: 575-988-3199 2

Eurofins Xenco, Carlsbad

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# Chain of Custody Record

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Environment Testing
America

Note: Since laboratory accreditations are subject to change, Eurofins Xenco 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 analysisfiests/marrix being analyzed the samples must be shipped back to the Eurofins Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC. BH08 (890-548-1) Possible Hazard Identification BH08 (890-548-2) Sample Identification - Client ID (Lab ID) Queenie 15 Federal #001H - 31403152 001 Deliverable Requested | II III IV, Other (specify) 432-704-5440(Tel) TX, 79701 State, Zip: elinquished by **/lidland** elinquished by elinquished by mpty Kit Relinquished by 211 W Florida Ave hipping/Receiving oject Name: ırofins Xenco lient Information (Sub Contract Lab) Custody Seal No H Project #: 89000048 Date/Time Date/Time VO # Due Date Requested 4/26/2021 Date/Time: Primary Deliverable Rank Phone: Sample Date FAT Requested (days) 4/20/21 4/20/21 Date Mountair Mountain 12 48 Sample Time 12 32 G=grab) (C=comp, Sample Preservation Code: Type Company Company Company Matrix Solid Solid Lab PM Kramer Jessica jessica kramer@eurofinset.com E-Mail Field Filtered Sample (Yes or No) Time NELAP - Texas ccreditations Required (See note) Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Monte Special Instructions/QC Requirements Perform MS/MSD (Yes or No) Cooler Temperature(s) °C and Other Remarks Received by × × 300\_ORGFM\_28D/DI\_LEACH Chloride × × 8016MOD\_NM/8016NM\_S\_Prep Full TPH × × 8021B/5035FP\_Calc BTEX Analysis Requested State of Origin.
New Mexico Carrier Tracking No(s): Method of Shipment: Date/Time Total Number of containers A HCL
B-NaOH
C Zn Acetate
D Nitric Acid
E NaHSO4
F MeOH COC No: 890-177 1 890-548-1 Preservation Codes Page 1 of 1 DI Water EDTA Amchlor Ascorbic Acid Special Instructions/Note うく M Hexane
N-None
O AsNaO2
P Na2O4S
Q Na2SO3
R Na2S2O
S H2SO4
T TSP Dod Company Company TSP Dodecahydrate
J Acetone
J MCAA v pH 4-5 other (specify) Na2O4S Na2SO3 Na2S2O3 Months AsNaO2

Ver 11/01/2020

#### **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-548-1

SDG Number: Lea County NM

List Source: Eurofins Carlsbad

Login Number: 548 List Number: 1 Creator: Clifton, Cloe

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	N/A	

<6mm (1/4").

#### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-548-1 SDG Number: Lea County NM

List Source: Eurofins Midland

List Creation: 04/21/21 03:00 PM

Creator: Copeland, Tatiana

Login Number: 548

List Number: 2

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	True	

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<6mm (1/4").

### **Environment Testing America**

#### **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-669-1

Laboratory Sample Delivery Group: 31403152 Client Project/Site: Queenie 15 Federal #001H

Revision: 2

For:

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

Attn: Joseph Hernandez

MAMER

Authorized for release by: 6/8/2021 10:57:52 AM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

.....LINKS .....

Review your project results through

Total Access

Have a Question?



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 8/10/2021 2:03:58 PM

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.

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Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H Laboratory Job ID: 890-669-1 SDG: 31403152

#### **Table of Contents**

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#### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-669-1 Project/Site: Queenie 15 Federal #001H

SDG: 31403152

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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)

**Dilution Factor** Dil Fac

Detection Limit (DoD/DOE) DΙ

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** 

Presumptive **PRES** 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: Queenie 15 Federal #001H

Job ID: 890-669-1

SDG: 31403152

Job ID: 890-669-1

**Laboratory: Eurofins Xenco, Carlsbad** 

Narrative

Job Narrative 890-669-1

#### Receipt

The sample was received on 5/13/2021 4:35 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 time was 7.2°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH01A (890-669-1).

#### **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.

Date Received: 05/13/21 16:35

Released to Imaging: 8/10/2021 2:03:58 PM

#### **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-669-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH01** Lab Sample ID: 890-669-1 Date Collected: 05/13/21 11:30

Matrix: Solid

Sample Depth: 2'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		05/17/21 09:05	05/17/21 15:36	1
Toluene	< 0.00198	U	0.00198	mg/Kg		05/17/21 09:05	05/17/21 15:36	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		05/17/21 09:05	05/17/21 15:36	1
m-Xylene & p-Xylene	< 0.00396	U	0.00396	mg/Kg		05/17/21 09:05	05/17/21 15:36	1
o-Xylene	0.00363		0.00198	mg/Kg		05/17/21 09:05	05/17/21 15:36	1
Xylenes, Total	< 0.00396	U	0.00396	mg/Kg		05/17/21 09:05	05/17/21 15:36	1
Total BTEX	<0.00396	U	0.00396	mg/Kg		05/17/21 09:05	05/17/21 15:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			05/17/21 09:05	05/17/21 15:36	1
1,4-Difluorobenzene (Surr)	99		70 - 130			05/17/21 09:05	05/17/21 15:36	1
Method: 8015B NM - Diesel R	ange Organi	ics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit ma/Ka	<u>D</u>	Prepared	Analyzed	
Analyte Gasoline Range Organics		Qualifier		Unit mg/Kg	<u>D</u>	Prepared 05/14/21 15:47	Analyzed 05/15/21 02:31	
Method: 8015B NM - Diesel R Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier	RL		<u>D</u>	05/14/21 15:47		1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result	Qualifier U	<b>RL</b> 49.8	mg/Kg	<u>D</u>	05/14/21 15:47	05/15/21 02:31 05/15/21 02:31	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result  <49.8 240	Qualifier U	49.8 49.8	mg/Kg	<u>D</u>	05/14/21 15:47 05/14/21 15:47 05/14/21 15:47	05/15/21 02:31 05/15/21 02:31	1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH	Result   <49.8     240   <49.8	Qualifier U	49.8 49.8 49.8	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/14/21 15:47 05/14/21 15:47 05/14/21 15:47	05/15/21 02:31 05/15/21 02:31 05/15/21 02:31	1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate	<ul> <li>Result</li> <li>&lt;49.8</li> <li>240</li> <li>&lt;49.8</li> <li>240</li> </ul>	Qualifier U	49.8 49.8 49.8 49.8 49.8	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 05/14/21 15:47	05/15/21 02:31 05/15/21 02:31 05/15/21 02:31 05/15/21 02:31	1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result   <49.8     240     <49.8     240       %Recovery	Qualifier U	## 49.8 49.8 49.8 ** **Limits**	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 <b>Prepared</b> 05/14/21 15:47	05/15/21 02:31 05/15/21 02:31 05/15/21 02:31 05/15/21 02:31 Analyzed	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate 1-Chlorooctane	Result   <49.8     240     <49.8     240	Qualifier  U  Qualifier	## A 49.8  49.8  49.8  49.8  49.8  **Limits**  70 - 130  70 - 130	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 <b>Prepared</b> 05/14/21 15:47	05/15/21 02:31 05/15/21 02:31 05/15/21 02:31 05/15/21 02:31 <b>Analyzed</b> 05/15/21 02:31	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Total TPH Surrogate 1-Chlorooctane o-Terphenyl	Result   <49.8     240	Qualifier  U  Qualifier	## A 49.8  49.8  49.8  49.8  49.8  **Limits**  70 - 130  70 - 130	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 <b>Prepared</b> 05/14/21 15:47	05/15/21 02:31 05/15/21 02:31 05/15/21 02:31 05/15/21 02:31 <b>Analyzed</b> 05/15/21 02:31	Dil Fac

#### **Surrogate Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

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)				
890-669-1	BH01	114	99				
LCS 880-3160/1-A	Lab Control Sample	93	104				
LCSD 880-3160/2-A	Lab Control Sample Dup	90	87				
MB 880-3160/5-A	Method Blank	74	83				
Surrogate Legend							
BFB = 4-Bromofluorob	enzene (Surr)						
DFBZ = 1,4-Difluorobe	nzene (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)			
890-669-1	BH01	115	115			
LCS 880-3136/2-A	Lab Control Sample	104	97			
LCSD 880-3136/3-A	Lab Control Sample Dup	103	98			
MB 880-3136/1-A	Method Blank	128	133 S1+			

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc.

Job ID: 890-669-1

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

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

Lab Sample ID: MB 880-3160/5-A

Matrix: Solid

**Analysis Batch: 3161** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3160

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1

MB MB

Surrogate	%Recovery (	Qualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74	70 - 130	05/17/21 09:05	05/17/21 14:20	1
1,4-Difluorobenzene (Surr)	83	70 - 130	05/17/21 09:05	05/17/21 14:20	1

Lab Sample ID: LCS 880-3160/1-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 3160 %Rec.

	<b>Бріке</b>	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1095		mg/Kg		109	70 - 130	
Toluene	0.100	0.09243		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.09811		mg/Kg		98	70 - 130	
m-Xylene & p-Xylene	0.200	0.1901		mg/Kg		95	70 - 130	
o-Xylene	0.100	0.09135		mg/Kg		91	70 - 130	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1.4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-3160/2-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Lab Control Sample Dup** 

Prop Batch: 3160

Prep Batch: 3160

	Spike	LCSD LCSD			%Rec.		RPD
Analyte	Added	Result Qualifier	Unit	D %Rec	Limits	RPD	Limit
Benzene	0.100	0.09192	mg/Kg	92	70 - 130	17	35
Toluene	0.100	0.09101	mg/Kg	91	70 - 130	2	35
Ethylbenzene	0.100	0.09557	mg/Kg	96	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1853	mg/Kg	93	70 - 130	3	35
o-Xylene	0.100	0.08857	mg/Kg	89	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1.4-Difluorobenzene (Surr)	87	70 - 130

Client: WSP USA Inc. Job ID: 890-669-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

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

Lab Sample ID: MB 880-3136/1-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3136

	IVID	IVID						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	Ū	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Total TPH	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	05/14/21 15:47	05/15/21 00:26	1
o-Terphenyl	133	S1+	70 - 130	05/14/21 15:47	05/15/21 00:26	1

LCS LCS

Lab Sample ID: LCS 880-3136/2-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

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

Prep Batch: 3136

%Rec.

Analyte Added Result Qualifier Limits Unit D %Rec Gasoline Range Organics 1000 898.1 mg/Kg 90 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1059 mg/Kg 106 70 - 130

Spike

C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	97	70 - 130

Lab Sample ID: LCSD 880-3136/3-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

Client Sam	nle ID:	Lab	Control	Sample	Dun
Olicili Galli	. כוו סוק	Lab	Control	Campie	Dup

Prep Type: Total/NA

Prep Batch: 3136

RPD Spike LCSD LCSD %Rec. Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 889.0 89 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1061 mg/Kg 106 70 - 130 20 C10-C28)

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3096/1-A

**Matrix: Solid** 

**Analysis Batch: 3152** 

Client Sample ID: Method Blank

**Prep Type: Soluble** 

MB MB

RL Unit Analyte Result Qualifier Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U 05/17/21 10:11 mg/Kg

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3096/2-A

Matrix: Solid

Analysis Batch: 3152

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Lab Sample ID: LCSD 880-3096/3-A

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Soluble

Matrix: Solid Prep Type: Soluble Analysis Batch: 3152

Spike LCSD LCSD %Rec. RPD

 Analyte
 Added Chloride
 Result Qualifier 250
 Unit Qualifier 243.1
 Unit Mig/Kg
 D %Rec Point William
 Limits RPD Point

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#### **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-669-1

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

GC VOA

Prep Batch: 3160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-669-1	BH01	Total/NA	Solid	5035	
MB 880-3160/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

**Analysis Batch: 3161** 

Lab Sample ID 890-669-1	Client Sample ID BH01	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch 3160
MB 880-3160/5-A	Method Blank	Total/NA	Solid	8021B	3160
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	8021B	3160
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3160

**GC Semi VOA** 

**Analysis Batch: 3108** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-669-1	BH01	Total/NA	Solid	8015B NM	3136
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015B NM	3136
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3136
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3136

Prep Batch: 3136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-669-1	BH01	Total/NA	Solid	8015NM Prep	
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

**HPLC/IC** 

Leach Batch: 3096

<b>Lab Sample ID</b> 890-669-1	Client Sample ID BH01	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-3096/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Analysis Batch: 3152** 

Released to Imaging: 8/10/2021 2:03:58 PM

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-669-1	BH01	Soluble	Solid	300.0	3096
MB 880-3096/1-A	Method Blank	Soluble	Solid	300.0	3096
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	300.0	3096
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3096

Eurofins Xenco, Carlsbad

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Date Received: 05/13/21 16:35

#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-669-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH01** Lab Sample ID: 890-669-1 Date Collected: 05/13/21 11:30

**Matrix: Solid** 

Batch Batch Dil Initial Batch Final Prepared Method Factor or Analyzed **Prep Type** Type Run **Amount Amount** Number **Analyst** Lab Total/NA 5035 5.05 g 3160 05/17/21 09:05 MR XEN MID Prep 5 mL Total/NA 8021B XEN MID Analysis 1 5 mL 5 mL 3161 05/17/21 15:36 MR Total/NA Prep 8015NM Prep 10.05 g 10 mL 3136 05/14/21 15:47 DM XEN MID Total/NA Analysis 8015B NM 1 3108 05/15/21 02:31 AJ XEN MID Soluble 5.05 g 50 mL 3096 05/14/21 09:31 CH XEN MID Leach DI Leach Soluble Analysis 300.0 1 3152 05/17/21 13:59 SC 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.

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

#### **Laboratory: Eurofins Xenco, Midland**

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

Authority	Pı	rogram	Identification Number	Expiration Date				
Texas	NI	ELAP	T104704400-20-21	06-30-21				
The fallessines are all the	: !   : 4 -:							
,		ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for wh				
the agency does not	offer certification.	•	, , ,	This list may include analytes for wh				
,		Matrix	Analyte	I his list may include analytes for wh				
the agency does not	offer certification.	•	, , ,	I his list may include analytes for wh				

Eurofins Xenco, Carlsbad

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#### **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-669-1

SDG: 31403152

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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
3015NM 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.

#### **Laboratory References:**

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

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#### **Sample Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-669-1 SDG: 31403152

 Lab Sample ID
 Client Sample ID
 Matrix
 Collected
 Received
 Depth

 890-669-1
 BH01
 Solid
 05/13/21 11:30
 05/13/21 16:35
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**Chain of Custody** 

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		ST	ANALYSIS REQUEST	Turn Around	Queenie 15 Federal #001H
	s: EDD ADaPT	Deliverables:	Email: Jeremy.Hill@wsp.com, Dan.Moir@wsp.com, Joe.Hemandez@wsp.co	mail: Jeremy.Hill@	91)702-2329
TSU/I	evel II	Reporting:Lev	Midland, TX 79705	City, State ZIP:	idland, TX 79705
	Project:	State of P	3300 North A Street	Address:	300 North A Street
nfields	Program: UST/PST ☐RP ☐rownfields	Program: L	Company Name: WSP USA	Company Nar	SP USA
Comm	Work Order Comr		Joseph Hernandez	Bill to: (if different)	seph Hernandez
م	www.xenco.com	320-2000)	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	75-392-7550) Phoenix	
ı			Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296	Midland, TX (432-704-5	のとうロカーの
			Houston, IX (281) 240-4200 Dallas, IX (214) 902-0300 San Antonio, IA (210) 505-5554	louston, IX (281) 240-4	

Address:

City, State ZIP:

Project Manager: Company Name:

	W.180		Relinguished by: (Signature)	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 enforced unless previously negotiated.	Notice: Signature of this document and relinguishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010								7		вно1А	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:	P.O. Number:	Project Number:	Project Name:
			(Signature)	. 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 c. 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.	cument and relinguis	and Metal(s) to	10 200.8 / 6020												Yes No	Yes No.	(Xes)	+7元十		Je	10	3.	Queenie 15 Federal #001H
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			Received b	and shall not a ach project and	amples constitu		8R									!	5/13/2021	Date Sampled	Total (	Correct	1017	닭	(Yes No	=			al #001H
	H		Received by: (Signature)	assume any resp a charge of \$51	utes a valid pur	1	8RCRA 13PPM				2						11:30	Time Sampled	Total Containers:	Correction Factor:	TOOL MO	Thermometer ID	Wet Ice:	Due Date	Rush:	Routine	Turr
		•	е)	ponsibility for a for each sample	chase order from	6010: 8R	M Texas 11			}							2	Depth		-0.2		(	Yes No	ate:			Turn Around
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	2	i	Date/Time	s or expe	ompany	₽S.	Al Sb As		_		1	-	_	_			×	TPH (E		_	_	_					
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			<sub>D</sub>			.1/7470	Sn U V										Ф	Sample Comments	, if received	ırts the day			WBS.CL.21.01096		NAPP2110325623		AAOLY Older Mores
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**Work Order Notes** 

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Revised Date 051418 Rev 2018.1

#### **Login Sample Receipt Checklist**

Job Number: 890-669-1 SDG Number: 31403152

List Source: Eurofins Xenco, Carlsbad

Login Number: 669 List Number: 1

Client: WSP USA Inc.

Creator: Ordonez, Gabby

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: 890-669-1 SDG Number: 31403152

Login Number: 669 List Source: Eurofins Xenco, Midland List Creation: 05/14/21 04:10 PM List Number: 2

Creator: Copeland, Tatiana

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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# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-670-1

Laboratory Sample Delivery Group: 31403152 Client Project/Site: Queenie 15 Federal #001H

Revision: 2

For:

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

Attn: Joseph Hernandez

JURAMER

Authorized for release by: 6/8/2021 10:57:07 AM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 8/10/2021 2:03:58 PM

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.

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Client: WSP USA Inc.
Project/Site: Queenie 15 Federal #001H

Laboratory Job ID: 890-670-1 SDG: 31403152

# **Table of Contents**

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# **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-670-1 Project/Site: Queenie 15 Federal #001H

SDG: 31403152

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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)

**Dilution Factor** Dil Fac

Detection Limit (DoD/DOE) DΙ

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** 

Presumptive **PRES** 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: Queenie 15 Federal #001H

Job ID: 890-670-1

SDG: 31403152

Job ID: 890-670-1

**Laboratory: Eurofins Xenco, Carlsbad** 

**Narrative** 

Job Narrative 890-670-1

#### Receipt

The sample was received on 5/13/2021 4:35 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 time was 7.2°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH02A (890-670-1).

#### **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.

**Matrix: Solid** 

Lab Sample ID: 890-670-1

05/14/21 15:47 05/15/21 02:52

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-670-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH02** 

Date Collected: 05/13/21 12:15 Date Received: 05/13/21 16:35

Sample Depth: 2'

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:02	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:02	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:02	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		05/17/21 09:05	05/17/21 16:02	1
o-Xylene	< 0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:02	1
Xylenes, Total	< 0.00403	U	0.00403	mg/Kg		05/17/21 09:05	05/17/21 16:02	1
Total BTEX	<0.00403	U	0.00403	mg/Kg		05/17/21 09:05	05/17/21 16:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			05/17/21 09:05	05/17/21 16:02	1
1,4-Difluorobenzene (Surr)	99		70 - 130			05/17/21 09:05	05/17/21 16:02	1
Method: 8015B NM - Diesel R	ange Organ	ics (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		05/14/21 15:47	05/15/21 02:52	1
Diesel Range Organics (Over C10-C28)	245		49.8	mg/Kg		05/14/21 15:47	05/15/21 02:52	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		05/14/21 15:47	05/15/21 02:52	1
Total TPH	245		49.8	mg/Kg		05/14/21 15:47	05/15/21 02:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Method: 300.0 - Anions, I	on Chromatography - Solub	le					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4740	25.0	mg/Kg			05/17/21 14:04	5

70 - 130

### **Surrogate Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percen	t Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-670-1	BH02	123	99	
LCS 880-3160/1-A	Lab Control Sample	93	104	
LCSD 880-3160/2-A	Lab Control Sample Dup	90	87	
MB 880-3160/5-A	Method Blank	74	83	
Surrogate Legend				
BFB = 4-Bromofluorol	penzene (Surr)			
DFBZ = 1,4-Difluorobe	enzene (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)	
890-670-1	BH02	103	106	
LCS 880-3136/2-A	Lab Control Sample	104	97	
LCSD 880-3136/3-A	Lab Control Sample Dup	103	98	
MB 880-3136/1-A	Method Blank	128	133 S1+	

Surrogate Legent

1CO = 1-Chlorooctane OTPH = o-Terphenyl

Eurofins Xenco, Carlsbad

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Client: WSP USA Inc.

Job ID: 890-670-1

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3160/5-A

Matrix: Solid

**Analysis Batch: 3161** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 3160

	MB I	MB						
Analyte	Result (	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Toluene	<0.00200 l	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	•
Ethylbenzene	<0.00200 l	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	•
m-Xylene & p-Xylene	<0.00400 U	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	
o-Xylene	<0.00200 l	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	•
Xylenes, Total	<0.00400 l	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	•
Total BTEX	<0.00400 l	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	

MB MB

Surrogate	%Recovery (	Qualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74	70 - 130	05/17/21 09:05	05/17/21 14:20	1
1,4-Difluorobenzene (Surr)	83	70 - 130	05/17/21 09:05	05/17/21 14:20	1

Lab Sample ID: LCS 880-3160/1-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 3160 %Rec.

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1095		mg/Kg		109	70 - 130	
Toluene	0.100	0.09243		mg/Kg		92	70 - 130	
Ethylbenzene	0.100	0.09811		mg/Kg		98	70 - 130	
m-Xylene & p-Xylene	0.200	0.1901		mg/Kg		95	70 - 130	
o-Xylene	0.100	0.09135		mg/Kg		91	70 - 130	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1.4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-3160/2-A

Matrix: Solid

**Analysis Batch: 3161** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 3160

	Spike	LCSD LC	SD			%Rec.		RPD
Analyte	Added	Result Qu	ıalifier Uni	t D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09192	mg/	/Kg	92	70 - 130	17	35
Toluene	0.100	0.09101	mg/	′Kg	91	70 - 130	2	35
Ethylbenzene	0.100	0.09557	mg/	′Kg	96	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1853	mg/	′Kg	93	70 - 130	3	35
o-Xylene	0.100	0.08857	mg/	/Kg	89	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1.4-Difluorobenzene (Surr)	87	70 - 130

Eurofins Xenco, Carlsbad

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Job ID: 890-670-1 Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H SDG: 31403152

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

Lab Sample ID: MB 880-3136/1-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3136

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg	_	05/14/21 15:47	05/15/21 00:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Total TPH	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	05/14/21 15:47 05/15/21 00:26	1
o-Terphenyl	133	S1+	70 - 130	05/14/21 15:47 05/15/21 00:26	1

Lab Sample ID: LCS 880-3136/2-A

**Matrix: Solid Prep Type: Total/NA Analysis Batch: 3108** Prep Batch: 3136 Snika ICC ICC % Doc

ı		эріке	LUS	LUS				%Rec.	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Gasoline Range Organics	1000	898.1		mg/Kg		90	70 - 130	
	(GRO)-C6-C10								
	Diesel Range Organics (Over	1000	1059		mg/Kg		106	70 - 130	
ı									

C10-C28)

LCS LCS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	104	70 - 130
o-Terphenyl	97	70 - 130

Lab Sample ID: LCSD 880-3136/3-A

**Matrix: Solid** 

**Client Sample ID: Lab Control Sample Dup** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Analysis Batch: 3108							Prep	Batch:	3136
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	889.0		mg/Kg		89	70 - 130	1	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1061		mg/Kg		106	70 - 130	0	20
C10-C28)									

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3096/1-A **Client Sample ID: Method Blank Prep Type: Soluble** 

**Matrix: Solid** 

Analyte

Chloride

**Analysis Batch: 3152** 

MB MB Unit Result Qualifier RL **Prepared** Analyzed Dil Fac <5.00 U 5.00 05/17/21 10:11 mg/Kg

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3096/2-A

Matrix: Solid

Analysis Batch: 3152

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Lab Sample ID: LCSD 880-3096/3-A

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Soluble

Analysis Batch: 3152

Spike LCSD LCSD %Rec. RPD

 Analyte
 Added Chloride
 Result 250
 Qualifier 250
 Unit mg/Kg
 D mg/Kg
 %Rec Limits 97
 RPD Limit 90

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# **QC Association Summary**

Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H

Job ID: 890-670-1

SDG: 31403152

#### **GC VOA**

#### Prep Batch: 3160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-670-1	BH02	Total/NA	Solid	5035	
MB 880-3160/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### **Analysis Batch: 3161**

<b>Lab Sample ID</b> 890-670-1	Client Sample ID BH02	Prep Type Total/NA	Solid	Method 8021B	Prep Batch 3160
MB 880-3160/5-A	Method Blank	Total/NA	Solid	8021B	3160
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	8021B	3160
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3160

#### **GC Semi VOA**

#### **Analysis Batch: 3108**

<b>Lab Sample ID</b> 890-670-1	Client Sample ID BH02	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015B NM	3136
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3136
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3136

#### Prep Batch: 3136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-670-1	BH02	Total/NA	Solid	8015NM Prep	
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### **HPLC/IC**

#### Leach Batch: 3096

<b>Lab Sample ID</b> 890-670-1	Client Sample ID BH02	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-3096/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### **Analysis Batch: 3152**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-670-1	BH02	Soluble	Solid	300.0	3096
MB 880-3096/1-A	Method Blank	Soluble	Solid	300.0	3096
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	300.0	3096
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3096

Date Received: 05/13/21 16:35

Leach

Analysis

XEN MID

XEN MID

#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-670-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH02** Lab Sample ID: 890-670-1 Date Collected: 05/13/21 12:15

**Matrix: Solid** 

05/14/21 09:31 CH

05/17/21 14:04 SC

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	3160	05/17/21 09:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3161	05/17/21 16:02	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	3136	05/14/21 15:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3108	05/15/21 02:52	AJ	XEN MID

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5.01 g

50 mL

3096

3152

**Laboratory References:** 

Soluble

Soluble

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

DI Leach

300.0

# **Accreditation/Certification Summary**

Job ID: 890-670-1 Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H SDG: 31403152

# **Laboratory: Eurofins Xenco, Midland**

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

Authority	P	rogram	Identification Number	Expiration Date
Texas	N	ELAP	T104704400-20-21	06-30-21
The following analyte:	s are included in this rep	ort, but the laboratory is i	not certified by the governing authority.	This list may include analytes for
the agency does not	offer certification.			The notine y monage analytes for
the agency does not of Analysis Method	offer certification.  Prep Method	Matrix	Analyte	
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# **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-670-1 SDG: 31403152

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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.

#### **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: Queenie 15 Federal #001H

Job ID: 890-670-1

SDG: 31403152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-670-1	BH02	Solid	05/13/21 12:15	05/13/21 16:35	2'

# **Chain of Custody**

Work Order No: \_

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334

Revised Date 051418 Rev. 2018 1		5					5
		4					3
		2	13-21 1635	2	4 D 30	7	1 Dish
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	ignature)	Received by: (Signature)	Signature)	Relinquished by: (Signature)
	previously negotiated.	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 cheric it 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.	osses or expenses incurred smitted to Xenco, but not an	rge of \$5 for each sample sub	es and shall not assum	e only for the cost of sample of \$75.00 will be applied to	of service. Xenco will be liab of Xenco. A minimum charge
	It assigns standard terms and conditions	affiliates and subcontractors. It assigns stand	ent company to Xenco, its a	valid purchase order from cl	samples constitutes a	ment and relinquishment of	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates
1631/245.1/7478/7471: Hg	Ag Ti U 1631/2	Cd Cr Co Cu Ph Mn Mo Ni Se	Sb As Ba Be	/SPLP 6010: BRCRA	alyzed TCLP	Circle Method(s) and Metal(s) to be analyzed	Circle Method(s)
TI Sn U V Zn	Mn Mo Ni K Se Ag SiO2	Cr Co Cu Fe Pb Mg		13PPM Texas 11	8RCRA	200.8 / 6020:	Total 200.7 / 6010
					_		
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- F							
	Discrete		×	15 2' 1	5/13/2021 12:15	S	вно2А
Sample Comments			TPH (E	Time Depth	Date Time Sampled Sampled	cation Matrix	Sample Identification
<u> </u>			PA 8		Total Containers:	Yes No N/A	Sample Custody Seals:
TAT starts the day recevied by the	TAT		015) 0=8	-0.2	Correction Factor:	Yes (No) N/A	Cooler Custody Seals:
	of Custody	890-670 Chain of Custody	021)	100 A	12	Yes No	Received Intact:
			)	er ID	Thermo	7.4/7.2	Temperature (°C):
WBS.CL.21.01096	~			Wet ice: (Yes) No	(es) No W	Temp Blank:	SAMPLE RECEIPT
				Due Date:		Jeremy Hill	Sampler's Name:
NAPP2110325623				Rush:		Lea	P.O. Number:
				Routine P	2	31403152	Project Number:
Work Order Notes	1	ANALYSIS REQUEST		Turn Around	ral #001H	Queenie 15 Federal #001H	Project Name:
Other:	Deliverables: EDD ADaPT	Joe.Hernandez@wsp.co	.com, Dan.Moir@wsp.c	Email: Jeremy.Hill@wsp.com, Dan.Moir@wsp.com,		(291)702-2329	
RP Uel IV	□evel III	Repo	Midland, TX 79705	City, State ZIP:		Midland, TX 79705	le ZIP:
	State of Project:		3300 North A Street	Address:		3300 North A Street	
☐RC ①perfund ☐	Program: UST/PST ☐RP ☐rownfields	Prog	WSP USA	Company Name:		WSP USA	
	Work Order Comments		Joseph Hernandez	Bill to: (if different)		Joseph Hernandez	Project Manager: Jo
ge1 of1	00) www.xenco.com <sup>3</sup> age	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)	) EL Paso,TX (915)585-3 (480-355-0900) Atlanta,G	Midland,TX (432-704-5440 75-392-7550) Phoenix,AZ	Hobbs,NM (5	ABORATORIES	LABI

### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-670-1 SDG Number: 31403152

Login Number: 670 List Source: Eurofins Xenco, Carlsbad

List Number: 1

Creator: Ordonez, Gabby

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: 890-670-1 SDG Number: 31403152

Login Number: 670 List Source: Eurofins Xenco, Midland List Creation: 05/14/21 04:09 PM List Number: 2

Creator: Copeland, Tatiana

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	

# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-671-1

Laboratory Sample Delivery Group: 31403152 Client Project/Site: Queenie 15 Federal #001H

Revision: 2

For:

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

Attn: Joseph Hernandez

MRAMER

Authorized for release by: 6/8/2021 10:56:26 AM

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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.

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Client: WSP USA Inc.
Project/Site: Queenie 15 Federal #001H

Laboratory Job ID: 890-671-1 SDG: 31403152

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### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-671-1 Project/Site: Queenie 15 Federal #001H

SDG: 31403152

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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)

**Dilution Factor** Dil Fac

Detection Limit (DoD/DOE) DΙ

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** 

Presumptive **PRES** 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: Queenie 15 Federal #001H

Job ID: 890-671-1

SDG: 31403152

Job ID: 890-671-1

**Laboratory: Eurofins Xenco, Carlsbad** 

Narrative

Job Narrative 890-671-1

#### Receipt

The sample was received on 5/13/2021 4:35 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 time was 7.2°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH03A (890-671-1).

#### **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.

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Matrix: Solid

Lab Sample ID: 890-671-1

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-671-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH03** 

Date Collected: 05/13/21 13:21 Date Received: 05/13/21 16:35

Sample Depth: 2'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:28	1
Toluene	<0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:28	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:28	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		05/17/21 09:05	05/17/21 16:28	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		05/17/21 09:05	05/17/21 16:28	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		05/17/21 09:05	05/17/21 16:28	1
Total BTEX	<0.00404	U	0.00404	mg/Kg		05/17/21 09:05	05/17/21 16:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	118		70 - 130			05/17/21 09:05	05/17/21 16:28	1
1,4-Difluorobenzene (Surr)	103		70 - 130			05/17/21 09:05	05/17/21 16:28	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		05/14/21 15:47	05/15/21 03:13	1
Diesel Range Organics (Over C10-C28)	116		49.9	mg/Kg		05/14/21 15:47	05/15/21 03:13	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/14/21 15:47	05/15/21 03:13	1
Total TPH	116		49.9	mg/Kg		05/14/21 15:47	05/15/21 03:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			05/14/21 15:47	05/15/21 03:13	1
o-Terphenyl	110		70 - 130			05/14/21 15:47	05/15/21 03:13	1

Method: 300.0 - Anions, Ion Ch	nromatogra	phy - Solul	ble					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3470		25.0	mg/Kg			05/17/21 14:09	5

# **Surrogate Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Perce	nt Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-671-1	BH03	118	103	
LCS 880-3160/1-A	Lab Control Sample	93	104	
LCSD 880-3160/2-A	Lab Control Sample Dup	90	87	
MB 880-3160/5-A	Method Blank	74	83	
Surrogate Legend				
BFB = 4-Bromofluorob	enzene (Surr)			
DFBZ = 1,4-Difluorobe	nzene (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)				
890-671-1	BH03	105	110				
LCS 880-3136/2-A	Lab Control Sample	104	97				
LCSD 880-3136/3-A	Lab Control Sample Dup	103	98				
MB 880-3136/1-A	Method Blank	128	133 S1+				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-671-1 Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H SDG: 31403152

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

Lab Sample ID: MB 880-3160/5-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3160

	MB N	MB						
Analyte	Result (	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200 U	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Toluene	<0.00200 l	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Ethylbenzene	<0.00200 l	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
m-Xylene & p-Xylene	<0.00400 U	Ú	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
o-Xylene	<0.00200 l	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Xylenes, Total	<0.00400 l	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Total BTEX	<0.00400 L	Ú	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	05/17/21 09:05 05/17/21 14:20	1
1,4-Difluorobenzene (Surr)	83		70 - 130	05/17/21 09:05 05/17/21 14:20	1

Lab Sample ID: LCS 880-3160/1-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 3160

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Benzene 0.100 0.1095 70 - 130 mg/Kg 109 Toluene 0.100 0.09243 mg/Kg 92 70 - 130 Ethylbenzene 0.09811 mg/Kg 98 0.100 70 - 130 m-Xylene & p-Xylene 0.200 0.1901 mg/Kg 95 70 - 130 o-Xylene 0.100 0.09135 70 - 130 mg/Kg 91

LCS LCS

Surrogate	%Recovery Qualifie	er Limits
4-Bromofluorobenzene (Surr)	93	70 - 130
1.4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: LCSD 880-3160/2-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 3160

	Spike	LCSD LCSD			%Rec.		RPD
Analyte	Added	Result Qualifier	Unit	D %Rec	Limits	RPD	Limit
Benzene	0.100	0.09192	mg/Kg	92	70 - 130	17	35
Toluene	0.100	0.09101	mg/Kg	91	70 - 130	2	35
Ethylbenzene	0.100	0.09557	mg/Kg	96	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1853	mg/Kg	93	70 - 130	3	35
o-Xylene	0.100	0.08857	mg/Kg	89	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1.4-Difluorobenzene (Surr)	87	70 - 130

Client: WSP USA Inc. Job ID: 890-671-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

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

Lab Sample ID: MB 880-3136/1-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3136

	MR	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Total TPH	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1

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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	05/14/21 15:47	05/15/21 00:26	1
o-Terphenyl	133	S1+	70 - 130	05/14/21 15:47	05/15/21 00:26	1

Lab Sample ID: LCS 880-3136/2-A

**Matrix: Solid Prep Type: Total/NA Analysis Batch: 3108** Prep Batch: 3136 Snika LCS LCS %Rac

		Spike	LUJ	LUJ				/oixec.	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Gasoline Range Organics	 1000	898.1		mg/Kg		90	70 - 130	
	(GRO)-C6-C10								
	Diesel Range Organics (Over	1000	1059		mg/Kg		106	70 - 130	
ı	C40 C20\								

C10-C28)

LCS LCS %Recovery Qualifier Surrogate Limits 1-Chlorooctane 104 70 - 130 97 70 - 130 o-Terphenyl

Lab Sample ID: LCSD 880-3136/3-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA Prep Batch: 3136

**Client Sample ID: Lab Control Sample** 

LCSD LCSD RPD Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 889.0 89 70 - 130 20 mg/Kg 1 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1061 mg/Kg 106 70 - 130 20 C10-C28)

LCSD LCSD

Surrogate	%Recovery	Qualitier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3096/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 3152** 

MB MB RL Unit Analyte Result Qualifier Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U 05/17/21 10:11 mg/Kg

Client: WSP USA Inc.

Job ID: 890-671-1

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3096/2-A

Matrix: Solid

Analysis Batch: 3152

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Lab Sample ID: LCSD 880-3096/3-A

Client Sample ID: Lab Control Sample Dup
Matrix: Solid

Prep Type: Soluble

Analysis Batch: 3152

LCSD LCSD RPD Spike %Rec. **Analyte** Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 243.1 90 - 110 0 mg/Kg 97

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# **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-671-1

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

**GC VOA** 

Prep Batch: 3160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-671-1	BH03	Total/NA	Solid	5035	
MB 880-3160/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

**Analysis Batch: 3161** 

<b>Lab Sample ID</b> 890-671-1	Client Sample ID BH03	Prep Type Total/NA	Matrix Solid	Method 8021B	Prep Batch 3160
MB 880-3160/5-A	Method Blank	Total/NA	Solid	8021B	3160
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	8021B	3160
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3160

**GC Semi VOA** 

**Analysis Batch: 3108** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-671-1	BH03	Total/NA	Solid	8015B NM	3136
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015B NM	3136
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3136
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3136

Prep Batch: 3136

<b>Lab Sample ID</b> 890-671-1	Client Sample ID BH03	Prep Type Total/NA	Matrix Solid	Method Prep Ba 8015NM Prep	tch
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

**HPLC/IC** 

Leach Batch: 3096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-671-1	BH03	Soluble	Solid	DI Leach	
MB 880-3096/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

**Analysis Batch: 3152** 

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-671-1	BH03	Soluble	Solid	300.0	3096
MB 880-3096/1-A	Method Blank	Soluble	Solid	300.0	3096
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	300.0	3096
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3096

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# **Lab Chronicle**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-671-1

SDG: 31403152

Client Sample ID: BH03 Lab Sample ID: 890-671-1

Date Collected: 05/13/21 13:21 Matrix: Solid
Date Received: 05/13/21 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	3160	05/17/21 09:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3161	05/17/21 16:28	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3136	05/14/21 15:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3108	05/15/21 03:13	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	3096	05/14/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		5			3152	05/17/21 14:09	SC	XEN MID

#### Laboratory References:

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

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# **Accreditation/Certification Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

SDG: 31403152

# **Laboratory: Eurofins Xenco, Midland**

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

Authority Texas		rogram ELAP	T104704400-20-21	Expiration Date 06-30-21
The following analyte the agency does not o	•	ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for w
Analysis Method	Prep Method	Matrix	Analyte	
8015B NM	8015NM Prep	Solid	Total TPH	
8021B	5035	Solid	Total BTEX	

Eurofins Xenco, Carlsbad

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# **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-671-1

SDG: 31403152

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
6035	Closed System Purge and Trap	SW846	XEN MID
015NM Prep	Microextraction	SW846	XEN MID
Ol 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.

#### **Laboratory References:**

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

Eurofins Xenco, Carlsbad

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# **Sample Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-671-1

SDG: 31403152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-671-1	BH03	Solid	05/13/21 13:21	05/13/21 16:35	2'

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		2	5-13-21 le 352		D++1/ X	1)	1/1/
Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	(Signature)	Received by:-(Sign	y: (Signature)	Relinquished by: (Signature
	be enforced unless previously negotiated.	alyzed. These terms will be enforced unless pu	ubmitted to Xenco, but not ana	of \$5 for each sample s	ach project and a charge	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 t	of Xenco. A minimum cl
	ard terms and conditions stances beyond the control	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	client company to Xenco, its at / losses or expenses incurred t	d purchase order from y responsibility for any	samples constitutes a val s and shall not assume al	document and relinquishment of a liable only for the cost of sample	Notice: Signature of this of service. Xenco will be
I <b>631/245.1</b> /74/0 //4/1:нg		d Cr Co Cu Pb Mn Me Ni Se Ag Ti U	RA Sh As Ba Be Cd Cr	TCLP / SPLP 6010: 8RCRA		Circle Method(s) and Metal(s) to be analyzed	Circle Method
r TI Sn U V Zn	Mg Mn Mo Ni K Se Ag SiO2 Na Sr	Cd Ca Cr Co Cu Fe Pb	Al Sb As Ba Be B	13PPM Texas 11	8RCRA	3010 200.8 / 6020:	Total 200.7 / 6010
					-		
			(				
		/	X	\			
				M			
				/ /			
						/	
Discrete	Dis		×	2' 1	5/13/2021 13:21	S	вноза
Sample Comments			TPH (I	d Depth	Date Time Sampled Sampled	ntification Matrix	Sample Identification
	- -		EPA (EF				
TAT starts the day recevied by the lab, if received by 4:30pm			A 801 PA 0=	_	Total Containers:	als: Yes No N/A	Sample Custody Seals:
		890-671 Chain of Custody	5) =8021		Correction Each	Ver No N	Received Intact:
			)	ter ID	Thermometer ID		Temperature (°C):
WBS.CL.21.01096			S	ce: (Ye≱ No	(Yes) No   Wet Ice:	EIPT Temp Blank:	SAMPLE RECEIPT
			_	Due Date:		Jeremy Hill	Sampler's Name:
NAPP2110325623				Rush:	R	Lea	P.O. Number:
				Routine		31403152	Project Number:
Work Order Notes		ANALYSIS REQUEST		Turn Around	ral #001H	Queenie 15 Federal #001H	Project Name:
Other:	Deliverables: EDD ADaPT	Email: Jeremy.Hill@wsp.com, Dan.Moir@wsp.com, Joe.Hernandez@wsp.co	sp.com, Dan.Moir@wsp.co	ail: Jeremy.Hill@ws	Em	(291)702-2329	Phone:
	Reporting:Level II	Repo	Midland, TX 79705	City, State ZIP:		Midland, TX 79705	City, State ZIP:
	State of Project:	St	3300 North A Street	Address:		3300 North A Street	Address:
s ☐RC ∰perfund ☐	Program: UST/PST ☐RP ☐rownfields	Progi		Company Name:		WSP USA	Company Name:
nents	Work Order Comments		Joseph Hernandez	Bill to: (if different)		Joseph Hernandez	Project Manager:
<sup>5</sup> age1 of1	www.xenco.com	Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)	Z (480-355-0900) Atlanta, GA	392-7550) Phoenix,A	Hobbs, NM (575-		
		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	00 Dallas.TX (214) 902-0300 40) EL Paso,TX (915)585-34	ston,TX (281) 240-420 lland,TX (432-704-54	Hou		Y
	Work Order No: _	ıstody	<b>Chain of Custody</b>				

### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-671-1

SDG Number: 31403152

List Source: Eurofins Xenco, Carlsbad

Login Number: 671 List Number: 1

Creator: Ordonez, Gabby

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	

Eurofins Xenco, Carlsbad

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### **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-671-1 SDG Number: 31403152

Login Number: 671 List Source: Eurofins Xenco, Midland List Creation: 05/14/21 04:09 PM List Number: 2

Creator: Copeland, Tatiana

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	



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-672-1

Laboratory Sample Delivery Group: 31403152 Client Project/Site: Queenie 15 Federal #001H

Revision: 2

For:

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

Attn: Joseph Hernandez

MAMER

Authorized for release by: 6/8/2021 10:55:42 AM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

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**Have a Question?** 



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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.

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Client: WSP USA Inc. Laboratory Job ID: 890-672-1 Project/Site: Queenie 15 Federal #001H

SDG: 31403152

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# **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-672-1 Project/Site: Queenie 15 Federal #001H

SDG: 31403152

**Qualifiers** 

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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)

**Dilution Factor** Dil Fac

Detection Limit (DoD/DOE) DΙ

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** 

Presumptive **PRES** 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: Queenie 15 Federal #001H

Job ID: 890-672-1

SDG: 31403152

Job ID: 890-672-1

**Laboratory: Eurofins Xenco, Carlsbad** 

**Narrative** 

Job Narrative 890-672-1

#### Receipt

The sample was received on 5/13/2021 4:35 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 time was 7.2°C

#### **Receipt Exceptions**

The following samples analyzed for method BTEX 8021 were received and analyzed from an unpreserved bulk soil jar: BH04A (890-672-1).

#### **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.

**Matrix: Solid** 

Lab Sample ID: 890-672-1

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-672-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH04** 

Date Collected: 05/13/21 10:18 Date Received: 05/13/21 16:35

Sample Donth: 2'

Analyte

Chloride

Analyte	anic Compo Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	$\overline{U}$	0.00200	mg/Kg		05/17/21 09:05	05/17/21 16:54	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 16:54	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 16:54	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		05/17/21 09:05	05/17/21 16:54	1
o-Xylene	< 0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 16:54	1
Xylenes, Total	< 0.00399	U	0.00399	mg/Kg		05/17/21 09:05	05/17/21 16:54	1
Total BTEX	<0.00399	U	0.00399	mg/Kg		05/17/21 09:05	05/17/21 16:54	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			05/17/21 09:05	05/17/21 16:54	1
4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	129 97		70 - 130 70 - 130				05/17/21 16:54 05/17/21 16:54	1
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel R	97 ange Organ		70 - 130 (GC)		_	05/17/21 09:05	05/17/21 16:54	
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel R Analyte	97 ange Organ Result	Qualifier	70 - 130 (GC)	Unit	<u>D</u>	05/17/21 09:05  Prepared	05/17/21 16:54  Analyzed	
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel R Analyte  Gasoline Range Organics	97 ange Organ	Qualifier	70 - 130 (GC)	<mark>Unit</mark> mg/Kg	<u>D</u>	05/17/21 09:05	05/17/21 16:54	Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel R Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	97 ange Organ Result	Qualifier	70 - 130 (GC)		<u>D</u>	05/17/21 09:05  Prepared  05/14/21 15:47	05/17/21 16:54  Analyzed	
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel R Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ange Organ Result <49.9	Qualifier U	70 - 130 (GC) RL 49.9	mg/Kg	<u>D</u>	05/17/21 09:05  Prepared  05/14/21 15:47  05/14/21 15:47	05/17/21 16:54  Analyzed  05/15/21 03:34	Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel R Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)	97 ange Organ Result <49.9 428	Qualifier U	70 - 130 (GC) RL 49.9	mg/Kg	<u>D</u>	05/17/21 09:05  Prepared 05/14/21 15:47 05/14/21 15:47	05/17/21 16:54  Analyzed 05/15/21 03:34 05/15/21 03:34	Dil Fac
1,4-Difluorobenzene (Surr)  Method: 8015B NM - Diesel R Analyte  Gasoline Range Organics (GRO)-C6-C10  Diesel Range Organics (Over C10-C28)  Oll Range Organics (Over C28-C36)  Total TPH	97 ange Organ Result <49.9 428 <49.9	Qualifier U	70 - 130 (GC) RL 49.9 49.9	mg/Kg mg/Kg mg/Kg	<u>D</u>	05/17/21 09:05  Prepared 05/14/21 15:47 05/14/21 15:47	05/17/21 16:54  Analyzed 05/15/21 03:34 05/15/21 03:34	Dil Fac
1,4-Difluorobenzene (Surr)	97 ange Organ Result <49.9 428 <49.9 428	Qualifier U	70 - 130 (GC)  RL 49.9  49.9  49.9  49.9	mg/Kg mg/Kg mg/Kg	D_	Prepared 05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 05/14/21 15:47 Prepared	Analyzed 05/15/21 03:34 05/15/21 03:34 05/15/21 03:34 05/15/21 03:34	Dil Fac

RL

24.8

Unit

mg/Kg

Prepared

Analyzed

05/17/21 14:14

Result Qualifier

7160

Eurofins Xenco, Carlsbad

Dil Fac

# **Surrogate Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-672-1

SDG: 31403152

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)	
890-672-1	BH04	129	97	
LCS 880-3160/1-A	Lab Control Sample	93	104	
LCSD 880-3160/2-A	Lab Control Sample Dup	90	87	
MB 880-3160/5-A	Method Blank	74	83	
Surrogate Legend				
BFB = 4-Bromofluorob	enzene (Surr)			
DFBZ = 1,4-Difluorobe	nzene (Surr)			

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

Matrix: Solid Prep Type: Total/NA

			Percent 9	Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-672-1	BH04	110	114	
LCS 880-3136/2-A	Lab Control Sample	104	97	
LCSD 880-3136/3-A	Lab Control Sample Dup	103	98	
MB 880-3136/1-A	Method Blank	128	133 S1+	

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Job ID: 890-672-1 Client: WSP USA Inc. Project/Site: Queenie 15 Federal #001H SDG: 31403152

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-3160/5-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3160

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Toluene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Total BTEX	<0.00400	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1

MB MB

Surrogate	%Recovery (	Qualifier Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74	70 - 130	05/17/21 09:05	05/17/21 14:20	1
1,4-Difluorobenzene (Surr)	83	70 - 130	05/17/21 09:05	05/17/21 14:20	1

Lab Sample ID: LCS 880-3160/1-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 3160

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30
80
80
30
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LCS LCS

Surrogate	%Recovery Qualifie	er Limits
4-Bromofluorobenzene (Surr)	93	70 - 130
1.4-Difluorobenzene (Surr)	104	70 - 130

Lab Sample ID: LCSD 880-3160/2-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 3160

LCSD LCSD Spike %Rec. **RPD** D %Rec Analyte Added Result Qualifier Unit Limits RPD Limit Benzene 0.100 0.09192 mg/Kg 92 70 - 130 17 35 Toluene 0.100 0.09101 mg/Kg 91 70 - 130 2 35 Ethylbenzene 0.100 0.09557 mg/Kg 96 70 - 130 3 35 m-Xylene & p-Xylene 0.200 0.1853 mg/Kg 93 70 - 130 35 0.100 0.08857 70 - 130 35 o-Xylene mg/Kg 89

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	90	70 - 130
1.4-Difluorobenzene (Surr)	87	70 - 130

Eurofins Xenco, Carlsbad

Client: WSP USA Inc. Job ID: 890-672-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

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

Lab Sample ID: MB 880-3136/1-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3136

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Total TPH	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	05/14/21 15:47	05/15/21 00:26	1
o-Terphenyl	133	S1+	70 - 130	05/14/21 15:47	05/15/21 00:26	1

Lab Sample ID: LCS 880-3136/2-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 3136

Spike LCS LCS %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Gasoline Range Organics 1000 898.1 mg/Kg 90 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1059 mg/Kg 106 70 - 130 C10-C28)

LCS LCS %Recovery Qualifier Surrogate Limits 70 - 130 1-Chlorooctane 104 o-Terphenyl 97 70 - 130

Lab Sample ID: LCSD 880-3136/3-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 3136

LCSD LCSD RPD Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 889.0 89 70 - 130 20 mg/Kg 1 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1061 mg/Kg 106 70 - 130 20 C10-C28)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3096/1-A Client Sample ID: Method Blank

MB MB

**Matrix: Solid** 

**Analysis Batch: 3152** 

**Prep Type: Soluble** 

RL Unit Analyte Result Qualifier Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U 05/17/21 10:11 mg/Kg

Client: WSP USA Inc. Job ID: 890-672-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3096/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble Analysis Batch: 3152** 

LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 242.6 mg/Kg 97 90 - 110

Lab Sample ID: LCSD 880-3096/3-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid Prep Type: Soluble Analysis Batch: 3152** 

LCSD LCSD Spike %Rec.

RPD **Analyte** Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 243.1 90 - 110 0 mg/Kg 97

# **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-672-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

### **GC VOA**

#### Prep Batch: 3160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method Prep Batch
890-672-1	BH04	Total/NA	Solid	5035
MB 880-3160/5-A	Method Blank	Total/NA	Solid	5035
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	5035
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035

#### **Analysis Batch: 3161**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-672-1	BH04	Total/NA	Solid	8021B	3160
MB 880-3160/5-A	Method Blank	Total/NA	Solid	8021B	3160
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	8021B	3160
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3160

### **GC Semi VOA**

#### **Analysis Batch: 3108**

<b>Lab Sample ID</b> 890-672-1	Client Sample ID BH04	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 3136
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015B NM	3136
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3136
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3136

#### Prep Batch: 3136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-672-1	BH04	Total/NA	Solid	8015NM Prep	
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### **HPLC/IC**

#### Leach Batch: 3096

<b>Lab Sample ID</b> 890-672-1	Client Sample ID BH04	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-3096/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### **Analysis Batch: 3152**

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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-672-1	BH04	Soluble	Solid	300.0	3096
MB 880-3096/1-A	Method Blank	Soluble	Solid	300.0	3096
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	300.0	3096
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3096

### **Lab Chronicle**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-672-1

SDG: 31403152

Client Sample ID: BH04 Lab Sample ID: 890-672-1

Date Collected: 05/13/21 10:18

Matrix: Solid

Date Received: 05/13/21 16:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	3160	05/17/21 09:05	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	3161	05/17/21 16:54	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	3136	05/14/21 15:47	DM	XEN MID
Total/NA	Analysis	8015B NM		1			3108	05/15/21 03:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	3096	05/14/21 09:31	CH	XEN MID
Soluble	Analysis	300.0		5			3152	05/17/21 14:14	SC	XEN MID

#### **Laboratory References:**

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

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# **Accreditation/Certification Summary**

Client: WSP USA Inc. Job ID: 890-672-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

# **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	T104704400-20-21	06-30-21
The following analyte the agency does not		eport, but the laboratory is r	not certified by the governing authority.	This list may include analytes for which
Analysis Method	Prep Method	Matrix	Analyte	
	8015NM Prep	Solid	Total TPH	
8015B NM	ou isinivi Frep	Solid	IUIAI IFII	

# **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-672-1

SDG: 31403152

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (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
3015NM 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.

#### **Laboratory References:**

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

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# **Sample Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-672-1

SDG: 31403152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-672-1	BH04	Solid	05/13/21 10:18	05/13/21 16:35	2'

Relinquished by: (Signature)

Received by: (Signature)

5-13-21 1635

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date 051418 Rev 2018 :

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**Chain of Custody** 

Work	
Order	
No:	

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31403152	Queenie 15 Federal #001H	(291)702-2329	Midland, TX 79705	3300 North A Street	WSP USA	Joseph Hernandez	ABORATORIES	メ
Routine	Turn Around	Email: Jeremy.Hill@w	City, State ZIP:	Address:	Company Name:	Bill to: (if different)	wildiano, i > (432-704-34 bs,NM (575-392-7550) Phoenix,/	1003Wn; 10 (201) 270 EA
	ANALYSIS REQUEST	Email: Jeremy.Hill@wsp.com, Dan.Moir@wsp.com, Joe.Hemandez@wsp.co	Midland, TX 79705	3300 North A Street	e: WSP USA	) Joseph Hernandez	midiatid, (А (322-704-9440) EL Faso, (А (370-9440-800), (А (2007) F 1200 Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000	Niches TV (422 704 5440) El Baso TV (915)585,3443   Jihhock TX (806)794-1296
	QUEST	Deliverables: EDD ADaPT		State of Project:	Program: UST/PST ☐RP ☐rownfields ☐RC	Work Order Comments	813-620-2000) <u>www.xenco.com</u> <sup>2</sup> age	,,
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**Work Order Notes** 

NAPP2110325623

P.O. Number:

Rush:

Project Name: Phone:

Project Number:

Address:

City, State ZIP:

Project Manager

Company Name:

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.	Circle Method(s) and Metal(s) to be analyzed	Total 200.7 / 6010									/	вно4А	Sample Identification	Sample Custody Seals:	Cooler Custody Seals:	Received Intact:	Temperature (°C):	SAMPLE RECEIPT	Sampler's Name:
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Eurofins Xenco, Carlsbad

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

**Chain of Custody Record** 

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Environment Testing America

Client Information (Sub Contract Lab)				Ziaiii	Kramer Jessica	ģ			_		: !	İ	7	1 017-060																
Shipping/Receiving	Phone			E-Mail jessic	E-Mail jessica kramer@eurofinset com	@eurofii	nset con	3	State	State of Origin New Mexico	J -		יי ס	Page: Page 1 of 1																
Company Eurofins Xenco					Accreditations Required NELAP - Louisiana	ns Require Louisian	ed (See note) na NELAP	Accreditations Required (See note) NELAP - Louisiana NELAP - Texas					<sub>20</sub> _	Job #: 890-672-1																
Address 1211 W Florida Ave	Due Date Requested 5/19/2021	a					<sub>A</sub>	Analvsis I	Requested	ated.			<u> </u>	Preservation Codes	des															
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State, Zip TX, 79701					en en trouse								пσс	Nitric Acid	O AsNaO2 P Na2O4S Q Na2SO3															
Phone: 432-704-5440(TeI)	PO#				in en en entre				· , · , · · · · ,						R Na2S2O3 S H2SO4															
Email	WO#				0)								de estable esta		U Acetone															
Project Name: Queenie 15 Federal #001H	Project #:				or N	ACH (	=X						decestion of	K EDTA	W pH 4-5 Z other (specify)															
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Note Since laboratory accreditations are subject to change, Eurofins Xenco 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 Xenco LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Xenco LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Xenco LLC.	C places the ownership ix being analyzed the saturn the signed Chain c	of method ar amples must to f Custody atto	nalyte & accredita be shipped back t esting to said con	tion compliand the Eurofins plicance to Eu	nce upon out s Xenco LLC Eurofins Xen	subcontra laborator	act laborat y or other	ories. This instructions	sample sh	nipment is ovided A	forwards ny chang	d under o	:hain-of- reditation	custody If the lab	oratory does not curre brought to Eurofins X															
Possible Hazard Identification Unconfirmed					Samp	Sample Disposal (		fee may	be asse	assessed if san	sample	's are r	etaine.	A fee may be assessed if samples are retained longer than 1 month) ant Disposal By Lab Archive For Most	1 month)															
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Custody Seals Intact Custody Seal No					ဂ္ဂ	der Temp	Coder Temperature(s) °C		and Other Remarks	S	ł																			

# **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-672-1 SDG Number: 31403152

List Source: Eurofins Xenco, Carlsbad

Login Number: 672 List Number: 1

Creator: Ordonez, Gabby

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**

Job Number: 890-672-1 SDG Number: 31403152

Login Number: 672
List Source: Eurofins Xenco, Midland
List Number: 2
List Creation: 05/14/21 04:06 PM

Creator: Copeland, Tatiana

Client: WSP USA Inc.

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	True	

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<6mm (1/4").



# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-673-1

Laboratory Sample Delivery Group: 31403152 Client Project/Site: Queenie 15 Federal #001H

Revision: 1

For:

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

Attn: Joseph Hernandez

MAMER

Authorized for release by: 6/8/2021 10:54:42 AM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

LINKS

Review your project results through

**Have a Question?** 



Visit us at:

www.eurofinsus.com/Env

Released to Imaging: 8/10/2021 2:03:58 PM

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.

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Client: WSP USA Inc.
Project/Site: Queenie 15 Federal #001H

Laboratory Job ID: 890-673-1 SDG: 31403152

# **Table of Contents**

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Sample Summary	14
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### **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-673-1 Project/Site: Queenie 15 Federal #001H

SDG: 31403152

#### **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** 

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** 

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)

**Dilution Factor** Dil Fac

Detection Limit (DoD/DOE) DΙ

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** 

Presumptive **PRES** 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: Queenie 15 Federal #001H

Job ID: 890-673-1

SDG: 31403152

Job ID: 890-673-1

Laboratory: Eurofins Xenco, Carlsbad

**Narrative** 

Job Narrative 890-673-1

#### REVISION

The report being provided is a revision of the original report sent on 5/19/2021. The report (revision 1) is being revised due to Per client email, corrected sample ID from BH06A to BH06.

Report revision history

#### Receipt

The sample was received on 5/13/2021 4:35 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 time was 7.2°C

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.

**Matrix: Solid** 

Lab Sample ID: 890-673-1

05/14/21 15:47 05/15/21 03:55

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-673-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH06** 

Date Collected: 05/13/21 09:26 Date Received: 05/13/21 16:35

Sample Depth: 1'

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		05/17/21 09:05	05/17/21 17:21	1
Toluene	< 0.00199	U	0.00199	mg/Kg		05/17/21 09:05	05/17/21 17:21	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		05/17/21 09:05	05/17/21 17:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		05/17/21 09:05	05/17/21 17:21	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		05/17/21 09:05	05/17/21 17:21	1
Xylenes, Total	< 0.00398	U	0.00398	mg/Kg		05/17/21 09:05	05/17/21 17:21	1
Total BTEX	<0.00398	U	0.00398	mg/Kg		05/17/21 09:05	05/17/21 17:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			05/17/21 09:05	05/17/21 17:21	1
1,4-Difluorobenzene (Surr)	102		70 - 130			05/17/21 09:05	05/17/21 17:21	1
Method: 8015B NM - Diesel R	ange Organ	ics (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		05/14/21 15:47	05/15/21 03:55	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		05/14/21 15:47	05/15/21 03:55	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		05/14/21 15:47	05/15/21 03:55	1
On Range Organics (Over 020-000)			40.0	mg/Kg		05/14/21 15:47	05/15/21 03:55	1
Total TPH	<49.9	U	49.9	mg/ng		03/14/21 13.47	00/10/21 00:00	
	<49.9 <b>%Recovery</b>		49.9 <b>Limits</b>	mg/rtg		Prepared	Analyzed	Dil Fac

Method: 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	39.3		5.04	mg/Kg			05/17/21 14:36	1

70 - 130

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# **Surrogate Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-673-1

SDG: 31403152

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

			Percer	nt Surrogate Recovery (Acceptar
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-673-1	BH06	102	102	
LCS 880-3160/1-A	Lab Control Sample	93	104	
LCSD 880-3160/2-A	Lab Control Sample Dup	90	87	
MB 880-3160/5-A	Method Blank	74	83	
Surrogate Legend				
BFB = 4-Bromofluorob	enzene (Surr)			
DFBZ = 1,4-Difluorobe	nzene (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)				
890-673-1	BH06	106	109				
LCS 880-3136/2-A	Lab Control Sample	104	97				
LCSD 880-3136/3-A	Lab Control Sample Dup	103	98				
MB 880-3136/1-A	Method Blank	128	133 S1+				

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Client: WSP USA Inc. Job ID: 890-673-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

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

Lab Sample ID: MB 880-3160/5-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3160

	MB I	MB						
Analyte	Result (	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Toluene	<0.00200 U	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Ethylbenzene	<0.00200 U	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
m-Xylene & p-Xylene	<0.00400 U	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
o-Xylene	<0.00200 U	U	0.00200	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Xylenes, Total	<0.00400 U	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1
Total BTEX	<0.00400 U	U	0.00400	mg/Kg		05/17/21 09:05	05/17/21 14:20	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130	05/17/21 09:05 05/17/21 14:20	1
1,4-Difluorobenzene (Surr)	83		70 - 130	05/17/21 09:05 05/17/21 14:20	1

Lab Sample ID: LCS 880-3160/1-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 3160

LCS LCS Spike %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Benzene 0.100 0.1095 70 - 130 mg/Kg 109 Toluene 0.100 0.09243 mg/Kg 92 70 - 130 Ethylbenzene 0.09811 mg/Kg 98 0.100 70 - 130 m-Xylene & p-Xylene 0.200 0.1901 mg/Kg 95 70 - 130 o-Xylene 0.100 0.09135 70 - 130 mg/Kg 91

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1.4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-3160/2-A

**Matrix: Solid** 

**Analysis Batch: 3161** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 3160

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09192		mg/Kg		92	70 - 130	17	35
Toluene	0.100	0.09101		mg/Kg		91	70 - 130	2	35
Ethylbenzene	0.100	0.09557		mg/Kg		96	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1853		mg/Kg		93	70 - 130	3	35
o-Xylene	0.100	0.08857		mg/Kg		89	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	90		70 - 130
1.4-Difluorobenzene (Surr)	87		70 - 130

Client: WSP USA Inc. Job ID: 890-673-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

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

Lab Sample ID: MB 880-3136/1-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 3136

	IVIB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1
Total TPH	<50.0	U	50.0	mg/Kg		05/14/21 15:47	05/15/21 00:26	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130	05/14/21 15:47	05/15/21 00:26	1
o-Terphenyl	133	S1+	70 - 130	05/14/21 15:47	05/15/21 00:26	1

Lab Sample ID: LCS 880-3136/2-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

Client Sample ID: Lab Control Sample	oie
Prep Type: Total/l	AN
Prep Batch: 31	36

Spike LCS LCS %Rec. Analyte Added Result Qualifier Limits Unit %Rec Gasoline Range Organics 1000 898.1 mg/Kg 90 70 - 130 (GRO)-C6-C10 Diesel Range Organics (Over 1000 1059 mg/Kg 106 70 - 130

C10-C28)

LCS LCS Surrogate %Recovery Qualifier Limits 1-Chlorooctane 104 70 - 130 o-Terphenyl 97 70 - 130

Lab Sample ID: LCSD 880-3136/3-A

**Matrix: Solid** 

**Analysis Batch: 3108** 

<b>Client Sample</b>	ID:	Lab	<b>Control</b>	Sample	Dup
			D T		1/51.6

Prep Type: Total/NA Prep Batch: 3136

RPD Spike LCSD LCSD %Rec. Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Gasoline Range Organics 1000 889.0 89 70 - 130 20 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 1061 mg/Kg 106 70 - 130 0 20 C10-C28)

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	98		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-3096/1-A

**Matrix: Solid** 

**Analysis Batch: 3152** 

Client Sample ID: Method Blank

**Prep Type: Soluble** 

MB MB RL Unit Analyte Result Qualifier Prepared Analyzed Dil Fac 5.00 Chloride <5.00 U 05/17/21 10:11 mg/Kg

Client: WSP USA Inc. Job ID: 890-673-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-3096/2-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Soluble Analysis Batch: 3152** LCS LCS Spike %Rec.

Analyte Added Result Qualifier Unit D %Rec Limits Chloride 250 242.6 mg/Kg 97 90 - 110

Lab Sample ID: LCSD 880-3096/3-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid Prep Type: Soluble Analysis Batch: 3152** LCSD LCSD RPD Spike %Rec.

**Analyte** Added Result Qualifier Unit D %Rec Limits RPD Limit Chloride 250 243.1 90 - 110 0 mg/Kg 97

# **QC Association Summary**

Client: WSP USA Inc.

Job ID: 890-673-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

# **GC VOA**

#### Prep Batch: 3160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-673-1	BH06	Total/NA	Solid	5035	
MB 880-3160/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

#### **Analysis Batch: 3161**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-673-1	BH06	Total/NA	Solid	8021B	3160
MB 880-3160/5-A	Method Blank	Total/NA	Solid	8021B	3160
LCS 880-3160/1-A	Lab Control Sample	Total/NA	Solid	8021B	3160
LCSD 880-3160/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	3160

### **GC Semi VOA**

#### **Analysis Batch: 3108**

<b>Lab Sample ID</b> 890-673-1	Client Sample ID BH06	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 3136
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015B NM	3136
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	3136
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	3136

#### Prep Batch: 3136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-673-1	BH06	Total/NA	Solid	8015NM Prep	
MB 880-3136/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-3136/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-3136/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	

#### **HPLC/IC**

#### Leach Batch: 3096

<b>Lab Sample ID</b> 890-673-1	Client Sample ID BH06	Prep Type Soluble	Matrix Solid	Method DI Leach	Prep Batch
MB 880-3096/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

#### **Analysis Batch: 3152**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-673-1	BH06	Soluble	Solid	300.0	3096
MB 880-3096/1-A	Method Blank	Soluble	Solid	300.0	3096
LCS 880-3096/2-A	Lab Control Sample	Soluble	Solid	300.0	3096
LCSD 880-3096/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	3096

Date Received: 05/13/21 16:35

#### **Lab Chronicle**

Client: WSP USA Inc. Job ID: 890-673-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

**Client Sample ID: BH06** Lab Sample ID: 890-673-1 Date Collected: 05/13/21 09:26

**Matrix: Solid** 

Batch Batch Dil Initial Batch Final Prepared Method Factor or Analyzed **Prep Type** Type Run **Amount Amount** Number **Analyst** Lab Total/NA 5035 5.02 g 3160 05/17/21 09:05 MR XEN MID Prep 5 mL Total/NA 8021B XEN MID Analysis 1 5 mL 5 mL 3161 05/17/21 17:21 MR Total/NA Prep 8015NM Prep 10.02 g 10 mL 3136 05/14/21 15:47 DM XEN MID Total/NA Analysis 8015B NM 1 3108 05/15/21 03:55 AJ XEN MID Soluble 50 mL 3096 05/14/21 09:31 CH XEN MID Leach DI Leach 4.96 g Soluble Analysis 300.0 1 3152 05/17/21 14:36 SC 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: 890-673-1 Project/Site: Queenie 15 Federal #001H SDG: 31403152

### **Laboratory: Eurofins Xenco, Midland**

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

Authority	Pı	ogram	Identification Number	Expiration Date
Texas	NI	ELAP	T104704400-20-21	06-30-21
The following englyte	a are included in this ren	art but the laboratory is a		This Parameter had a section of the form
0 ,		ort, but the laboratory is r	not certified by the governing authority.	This list may include analytes for wh
the agency does not	offer certification.	•	, , ,	I his list may include analytes for wh
0 ,		Matrix	Analyte	I his list may include analytes for wh
the agency does not	offer certification.	•	, , ,	This list may include analytes for wh

# **Method Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-673-1

SDG: 31403152

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
6035	Closed System Purge and Trap	SW846	XEN MID
015NM Prep	Microextraction	SW846	XEN MID
Ol 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.

#### **Laboratory References:**

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

Eurofins Xenco, Carlsbad

3

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# **Sample Summary**

Client: WSP USA Inc.

Project/Site: Queenie 15 Federal #001H

Job ID: 890-673-1

SDG: 31403152

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-673-1	BH06	Solid	05/13/21 09:26	05/13/21 16:35	1'

**Chain of Custody** 

Work Order No:

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

Total 200.7/6010 200.8/6020:  8RCRA 13PPM Texas 11 AI Sh As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sh As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn Circle Method(s) and Metal(s) to be analyzed Total 200.7/6010: 8RCRA Sh As Ba Be Cd Ca Ca Cu Pb Ma Mo Ni Se Ag Ti U 1831 245.117470 17411: Hg dollars signature of this document and enhapts and exhibit ease of a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard lumas and conditions of service. Xenco will be fable ently for the cast of a semples and exhibit and a saturate any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of service. Xenco 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 proviously regoliated.  Relinquished by: (Signature) Received by: (Signature) Date/Time Date/Time Relinquished by: (Signature) Date/Time	Be B Cd Ca (Be Cd Cr. Co.) Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be Cd Cr. Co. Be B Cd Ca (Be) Be	1 Al Sb As Ba RA Sb As Ba Rea Sb As Ba client company to Xen y losses or expenses in submitted to Xenco, bu Date/Time	9:26 1' 1  9:26 1' 1  RCRA 13PPM Texas 11 / TCLP / SPLP 6010: 8RCRA 13 purchase order from ciles the assume any responsibility for any loss and a charge of \$5 for each sample subm by: (Signature)	Sampled Sampled  5/13/2021 9:26  5/13/2021 9:26  8:26  8RCRA 13PPN  8RCRA 13PPN  8RCRA 13PPN  13/22ed TCLP / SPLP  15 samples constitutes a valid purch project and a charge of \$5 to peach peac	BH06A  S 5/13/2021 9:26 1' 1 X X X X  Total 200.7 / 6010 200.8 / 6020:  Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cc Circle Method(s) and metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cc Circle Method(s) and metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cc Circle Method(s) and metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cc Circle Method(s) and metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cc Circle Method(s) and metal(s) to be analyzed of stringe of \$5 for each sample submitted to Xenco, but not analyzed.  Received by: (Signature)  Received by: (Signature)  Received by: (Signature)  Received by: (Signature)  Received by: (Signature)  Received by: (Signature)
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g SiO2 Na Sr Ti Sn U V Zn 1831/243.1/7470 /7471:	Be B Cd Cr. Co.  Be Cd Cr. Co.  Be Cd Cr. Co.  Be co. its affiliates and s nourred by the client in the control of the client in the control of the client in the control of the client in the client	AI Sb As Ba A Sb As Ba A Sb As Ba A Sb As Ba A Scanney to Xenoses in the second by the	3PPM Texas 11 3PPM Texas 11 4 purchase order from clily responsibility for any loy of \$5 for each sample sub	5/13/2021 9:26 5/13/2021 9:26 8RCRA 9/1/2ed TCLP / S 1/1/2ed	S 5 200.8 / 6020:  Metal(s) to be anal t and relinquishment of s ty for the cost of samples 75.00 will be applied to es
\g SiO2 Na Sr Tl Sn U V Zn	Be B Cd Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca Ca	AI Sb As Ba	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5/13/2021 9:26 5/13/2021 9:26 6/13/2021 9:26	200.8 / 6020:
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	EPA	8015	-0.	Correction Factor:	Z
890-673 Chain of Custody	300.	)	,	とうなっと	)8. Z
	0)	_	ē	Thermometer ID	7.4/1.2
WBS.CL.21.01096			(Yes No	Yes No Wet Ice:	SAMPLE RECEIPT Temp Blank:
			Due Date:		Jeremy Hill
NAPP2110325623	_		Rush:	R	Lear
			Routine		31403152
ANALYSIS REQUEST Work Order Notes	A		Turn Around	ral #001H	Queenie 15 Federal #001H
Joe Hernandez@wsp.co Deliverables: EDD ADaPT Other:	1 15	.com, Dan.Moir@	Email: Jeremy.Hill@wsp.com, Dan.Moir@wsp.com	Em	(291)702-2329
□evel III □ST/UST □	79705	Midland, TX 79705	City, State ZIP:		Midland, TX 79705
<b>*</b>	Street	3300 North A Street	Address:		3300 North A Street
Program: UST/PST □RP □ rownfields □RC □ perfund □		WSP USA	Company Name:		WSP USA
Work Order Comments	andez	Joseph Hernandez	Bill to: (if different)		Joseph Hernandez

# **Login Sample Receipt Checklist**

Job Number: 890-673-1

SDG Number: 31403152

Login Number: 673 List Source: Eurofins Xenco, Carlsbad

List Number: 1 Creator: Clifton, Cloe

<6mm (1/4").

Client: WSP USA Inc.

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	N/A	

# **Login Sample Receipt Checklist**

Job Number: 890-673-1 SDG Number: 31403152

List Source: Eurofins Xenco, Midland

List Creation: 05/14/21 04:07 PM

List Number: 2 Creator: Copeland, Tatiana

Client: WSP USA Inc.

Login Number: 673

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	

Released to Imaging: 8/10/2021 2:03:58 PM

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

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 31022

#### **CONDITIONS**

Operator:	OGRID:
MARATHON OIL PERMIAN LLC	372098
5555 San Felipe St.	Action Number:
Houston, TX 77056	31022
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created	Condition	Condition
Ву		Date
chensley	Isley Marathon's deferral requests to complete final remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first is approved. The deferred 8.	
	C-141 will be accepted for record and marked accordingly. The release will remain open in OCD database files and reflect an open environmental issue.	