wsp

WSP USA

3300 North "A" Street Building 1, Unit 222 Midland, Texas 79705 432.704.5178

March 25, 2022

District I New Mexico Oil Conservation Division 1625 N. French Drive Hobbs, New Mexico 88240

RE: Remediation Work Plan
Nocaster 19 Federal 004H
Incident Number NAPP2124350596
Lea County, New Mexico

To Whom It May Concern:

WSP USA Inc. (WSP) on behalf of COG Operating, LLC (COG), presents the following Remediation Work Plan (Work Plan) detailing site assessment activities completed to date and proposing additional remediation activities to address the impacted soil resulting from a release at the at the Nocaster 19 Federal 004H (Site) in Unit P, Section 19, Township 23 South, Range 34 East, in Lea County, New Mexico (Figure 1).

## **RELEASE BACKGROUND**

On August 18, 2021, an oil dump diaphragm on a production knock out ruptured, causing the oil dump valve to malfunction. The malfunction resulted in a flare fire and the release of 0.9 barrels (bbls) of crude oil and 0.9 bbls of produced water. The release impacted the well pad and the adjacent pasture. No released fluids were recovered. COG reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on August 25, 2021, and subsequently submitted a Release Notification Form C-141 (Form C-141) on August 31, 2021. The release was assigned Incident Number NAPP2124350596.

Remediation efforts were postponed pending issuance of a Right of Entry (ROE) Permit requesting access from the New Mexico State Land Office (SLO). The ROE permit was submitted on September 9, 2021, and the executed permit was received from the SLO on November 2, 2021.

## 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). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 321734103290001, located approximately 1.4 miles northeast of the Site. The groundwater well



has a reported depth to groundwater of 345 feet bgs and a total depth of 400 feet bgs. Well records used for depth to groundwater determination are included in Attachment 1.

The closest continuously flowing water or significant watercourse to the Site is an emergent palustrine wetland, located approximately 2,340 feet southeast of the Site. The Site is greater than 200 feet of a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

## **CLOSURE CRITERIA**

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

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

A reclamation standard of 600 mg/kg chloride and 100 mg/kg TPH was applied to the top four feet of the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top four feet of areas that will be reclaimed following remediation.

## SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

Following the receipt of the approved ROE Permit, WSP personnel visited the Site on November 5, 2021, to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel collected four preliminary soil samples (SS01 through SS04) within the release extent from a depth of approximately 0.5 feet bgs to assess the extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site assessment and a photographic log is included in Attachment 2.



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

Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated that TPH-GRO/TPH-DRO, TPH, and chloride concentrations exceeded the Site Closure Criteria and/or the reclamation standards. Based on visible observations and laboratory analytical results for the preliminary samples, additional remediation activities were warranted.

### **DELINEATION SOIL SAMPLING AND ANALYTICAL RESULTS**

On February 15, 2022, WSP personnel returned to the Site to complete delineation activities. Eight boreholes (BH01 through BH08) were advanced via hand auger within and around the release extent to delineate the lateral and vertical extent of impacted soil. Boreholes BH01 through BH04 were advanced within the release extent at the SS01 through SS04 preliminary soil sample locations. The boreholes were advanced to a maximum depth of 5 feet bgs. Delineation soil samples were collected from the boreholes at depths ranging from 1-foot bgs to 5 feet bgs. The delineation soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the boreholes were logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation borehole soil samples were collected, handled, and analyzed as described above and submitted to Eurofins in Carlsbad, New Mexico. The release extent and delineation soil sample locations are depicted on Figure 2.

Laboratory analytical results for the delineation samples collected from boreholes BH05 through BH08, advanced around the release extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria and compliant with the reclamation standards for samples collected in the top four feet of pasture areas. Based on the laboratory analytical results, the lateral extent of the release was successfully defined.

Laboratory analytical results for the delineation samples collected from borehole BH02, advanced within pasture the release extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the reclamation standards. Laboratory analytical results for the delineation samples collected from boreholes BH01, BH03, and BH04, advanced within the pasture release extent, indicated that TPH and/or chloride concentrations exceeded the reclamation standard at depths ranging from 1-foot to 3 feet bgs. The terminal depth sample collected at 5 feet bgs from boreholes BH01 through BH04 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Site Closure



Criteria and successfully defined the vertical extent of the release. The analytical results are summarized on Table 1 and laboratory analytical reports are included in Attachment 4.

## PROPOSED REMEDIATION WORK PLAN

An estimated 200 cubic yards of impacted soil is present within the subsurface at the Site. WSP and COG propose to excavate the impacted soil in the release area to depths ranging from 1-foot to 3 feet bgs. Excavation activities will proceed until the final excavation samples confirm compliance with the Site Closure Criteria and with the reclamation standards for samples collected in the top four feet of pasture areas. The impacted soil will be disposed of at a licensed disposal facility.

Following removal of impacted soil, 5-point composite confirmation samples will be collected from the sidewalls and floors of the excavation. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The composite samples will represent a maximum 200 square foot sampling area. The excavation soil samples will be handled following the same procedures as described above and analyzed at Eurofins in Carlsbad, New Mexico. Once COG has confirmed all impacted soil has been successfully removed, the excavation will be backfilled with material purchase locally and recontoured to match pre-existing site conditions. The disturbed pasture areas will be re-seeded with an approved BLM seed mixture.

Additionally, in order to determine depth to groundwater at the Site and confirm the applied Closure Criteria, WSP and COG propose to complete a depth to water boring within 0.5 miles of the release. WSP will oversee the installation of a soil boring utilizing a truck-mounted hollow-stem auger rig. The soil boring will be advanced to a depth of approximately 110 feet bgs or until groundwater is encountered. A WSP geologist will log and describe soils continuously and will document observations on a lithologic/ soil sampling log. The borehole will be left open for over 72 hours to allow for the potential slow infill of groundwater. Following the 72-hour waiting period depth to groundwater will be measured or the WSP geologist will confirm the boring is dry. The borehole will be properly abandoned following New Mexico Office of the State Engineer (NMOSE) procedures. WSP and COG will include documentation of the soil boring installation and the lithologic/soil sampling log in a subsequent closure request.

COG anticipates beginning remediation within 90 days of receipt of the approved remediation work plan. A final report requesting closure will be submitted within 30 days of receipt of final laboratory analytical results. The Form C-141 requesting approval of this work plan is included in Attachment 5.

If you have any questions or comments, please do not hesitate to contact Ms. Aimee Cole at (720) 384-7365.



Sincerely,

WSP USA Inc.

Tacoma Morrissey Consultant, Geologist

Mouissey

Aimee Cole

Sr. Consultant, Environmental Scientist

cc: Charles Beauvais, COG Operating, LLC

New Mexico State Land Office

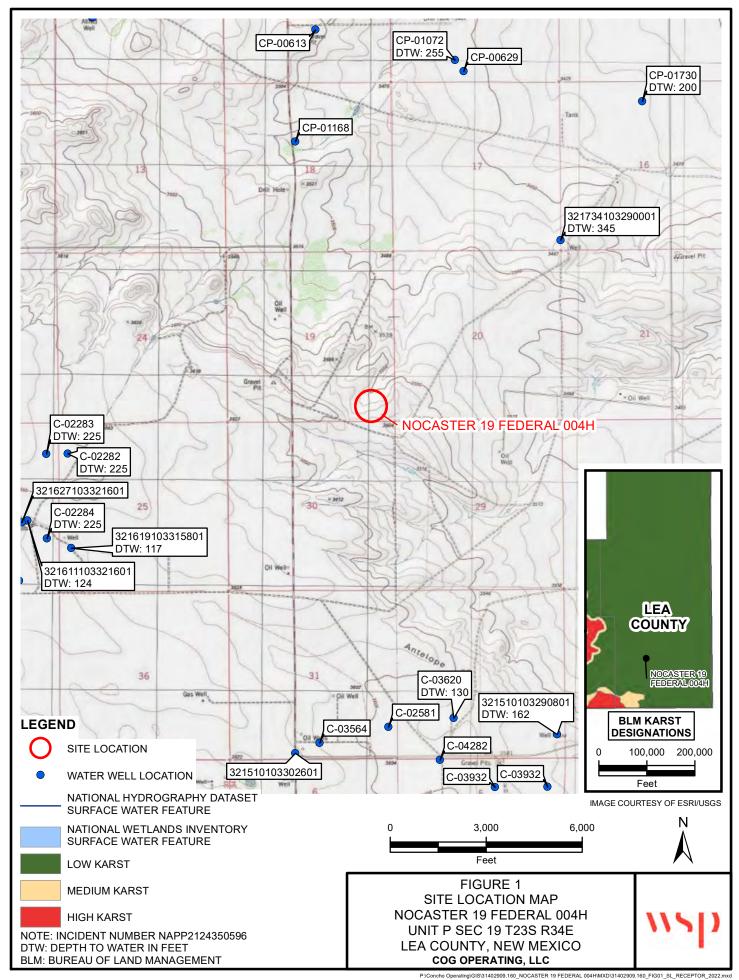
## Attachments:

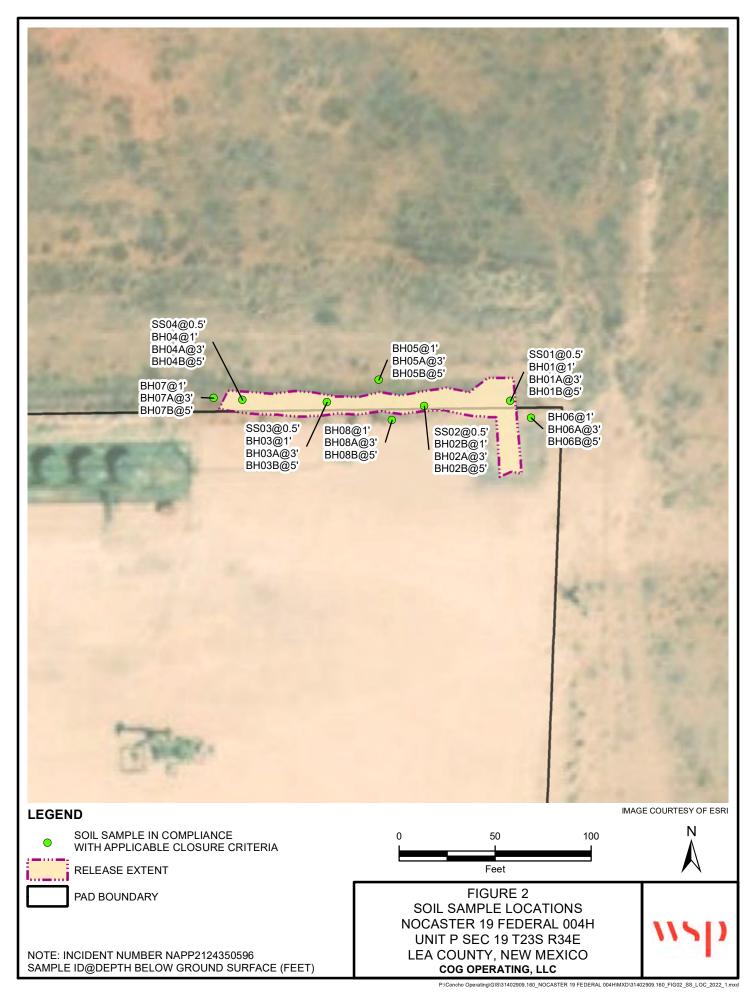
Figure 1 Site Location Map
Figure 2 Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Referenced Well Records

Attachment 2 Photographic Log

Attachment 3 Lithologic / Soil Sampling Logs Attachment 4 Laboratory Analytical Reports

Attachment 5 Form C-141





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Table 1

# Soil Analytical Results Nocaster 19 Federal 004H Incident Number NAPP2124350596 COG Operating, 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 Cl	osure Criteria (NM	AC 19.15.29)	10	50	NE	NE	NE	1,000	2,500	20,000
Preliminary Soil Sa	mples									
SS01	11/05/2021	0.5	<0.00200	<0.00399	4,290	<49.8	<49.8	4,290	4,290	166*
SS02	11/05/2021	0.5	<0.00202	<0.00403	151	<49.9	<49.9	151	151	1,330*
SS03	11/05/2021	0.5	<0.00199	<0.00398	65.3	<50.0	<50.0	65.3	65.3	7,310*
SS04	11/05/2021	0.5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	11,900*
Delineation Boreh	ole Samples									
BH01	02/15/2022	1	<0.00198	<0.00397	113	<50.0	<50.0	113	113	960*
BH01A	02/15/2022	3	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	1,430*
BH01B	02/15/2022	5	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	761
BH02	02/15/2022	1	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	30.5*
BH02A	02/15/2022	3	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	20.1*
BH02B	02/15/2022	5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	27.4
BH03	02/15/2022	1	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	689*
вноза	02/15/2022	3	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	234*
внозв	02/15/2022	5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	57.0
BH04	02/15/2022	1	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	<50.0	644*
BH04A	02/15/2022	3	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	<49.9	150*
вно4в	02/15/2022	5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	12.9
BH05	02/15/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	531*
вно5А	02/15/2022	3	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	<50.0	41.1*
вноѕв	02/15/2022	5	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	30.9

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## Table 1

## Soil Analytical Results Nocaster 19 Federal 004H Incident Number NAPP2124350596 COG Operating, 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 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
вн06	02/15/2022	1	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	700
вно6А	02/15/2022	3	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	833
вно6в	02/15/2022	5	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	495
вн07	02/15/2022	1	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	392*
вно7А	02/15/2022	3	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	56.1*
вно7в	02/15/2022	5	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	26.1
BH08	02/15/2022	1	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	44.0
BH08A	02/15/2022	2	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	<49.9	12.1

## 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

Text - impacted soil was excavated

ORO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

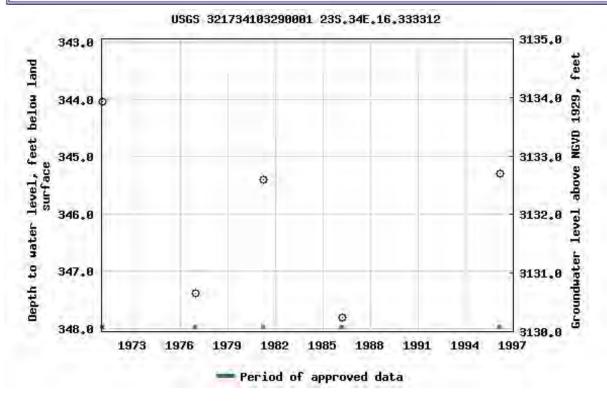
< - indicates result is less than the stated laboratory method practical quantitation limit

NE - Not Established

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

\* - incicates soil sample is located in the pasture in the top four feet and the reclamation standard will be applied

# DESCRIPTION: Latitude 32°17'53", Longitude 103°28'59" NAD27 Lea County, New Mexico , Hydrologic Unit 13070007 Well depth; 400 feet Land surface altitude: 3,78.00 feet above NGVD29. Well completed in "Chinle Formation" (231CHNL) local aquifer. Well completed in "Chinle Formation" (231CHNL) local aquifer AVAILABLE DATA: Data Type Begin Date End Date Count Field groundwater-level measurements 1971-01-13 1996-03-08 5 Revisions Unavailable (site:0) (timeseries:0) OPERATION: Record for this site is maintained by the USGS New Mexico Water Science Center Email questions about this site to New Mexico Water Science Center Water-Data Inquiries





## New Mexico Office of the State Engineer

## **Point of Diversion Summary**

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag POD Number Q64 Q16 Q4 Sec Tws

X Y

C 02282

**Q64 Q16 Q4 Sec Tws Rng** 3 1 1 25 23S 33E

638098 3572436\*

6

Driller License: Driller Company:

**Driller Name:** CARL BRININSTOOL

Drill Start Date:Drill Finish Date:12/31/1922Plug Date:Log File Date:PCW Rcv Date:Source:

Pump Type:Pipe Discharge Size:Estimated Yield:3 GPMCasing Size:6.50Depth Well:325 feetDepth Water:225 feet

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

9/2/21 8:32 AM

POINT OF DIVERSION SUMMARY

<sup>\*</sup>UTM location was derived from PLSS - see Help



	PHOTOGRAPHIC LOG	
COG Operating, LLC	Nocaster 19 Federal 004H	NAPP2124350596
	Lea County, New Mexico	

Photo No.	Date	
I HOLO INO.		
1	November 5, 2022	
Photo of release	extent taken during	
	e assessment.	

Photo No.	Date
2	November 5, 2022
Photo of release	extent taken during assessment.



PHOTOGRAPHIC LOG								
COG Operating, LLC	Nocaster 19 Federal 004H	NAPP2124350596						
	Lea County, New Mexico							

Photo No.	Date						
3	February 15, 2022						
Photo of borehole	completed during						
delineation activities.							

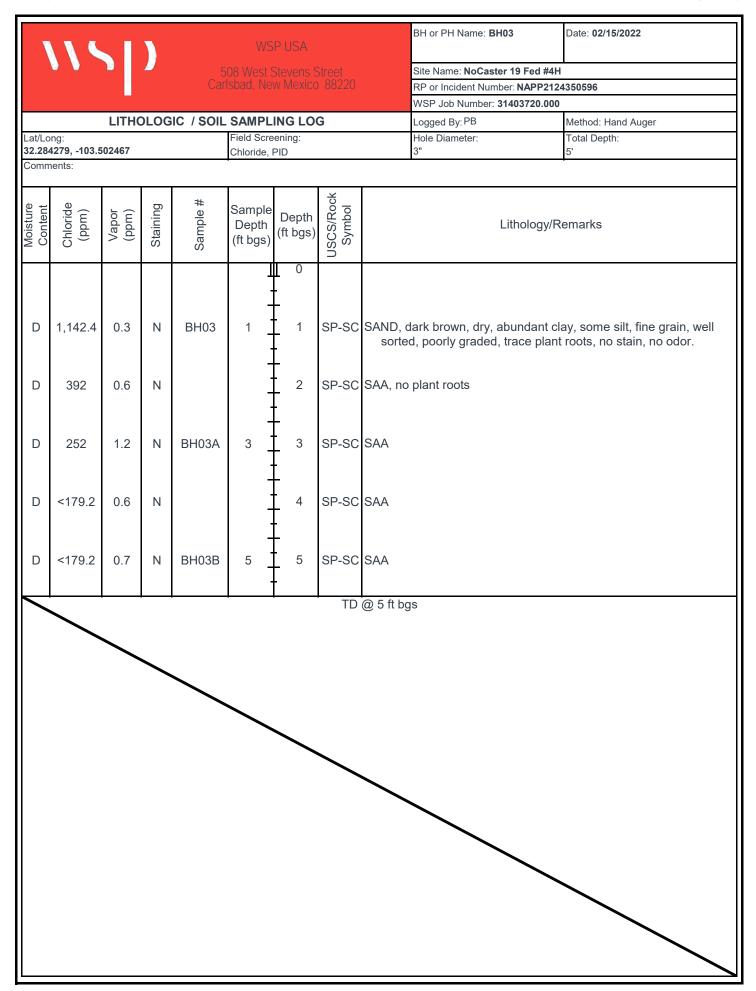


Photo No.	Date						
4	February 15, 2022						
Photo of borehole completed during							
delineatio	n activities.						
İ							

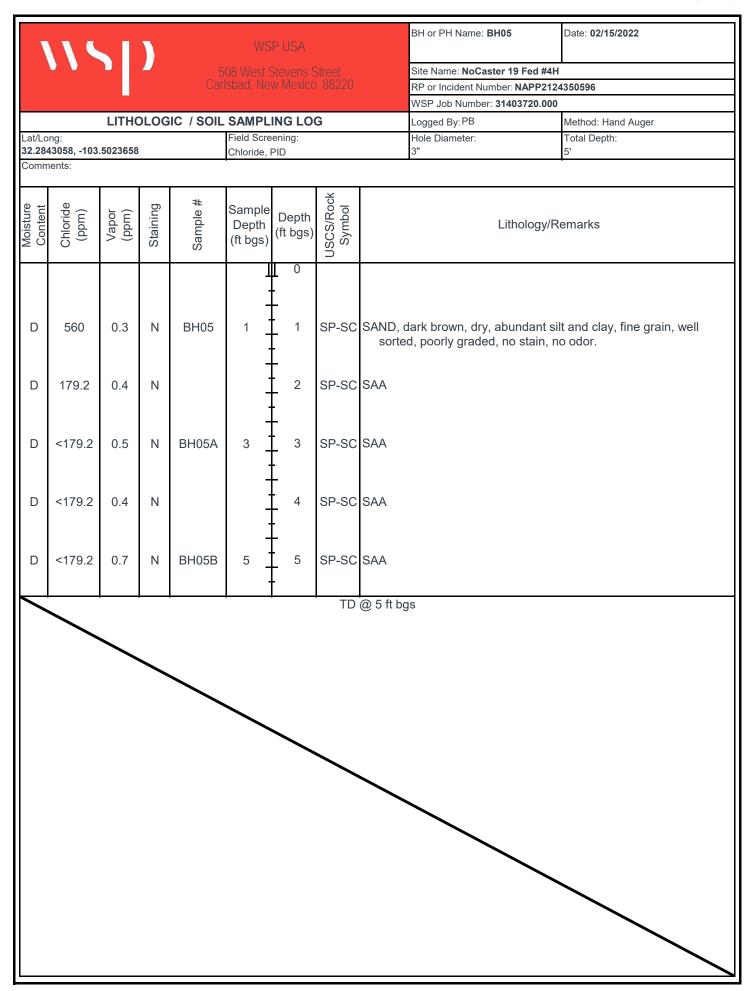


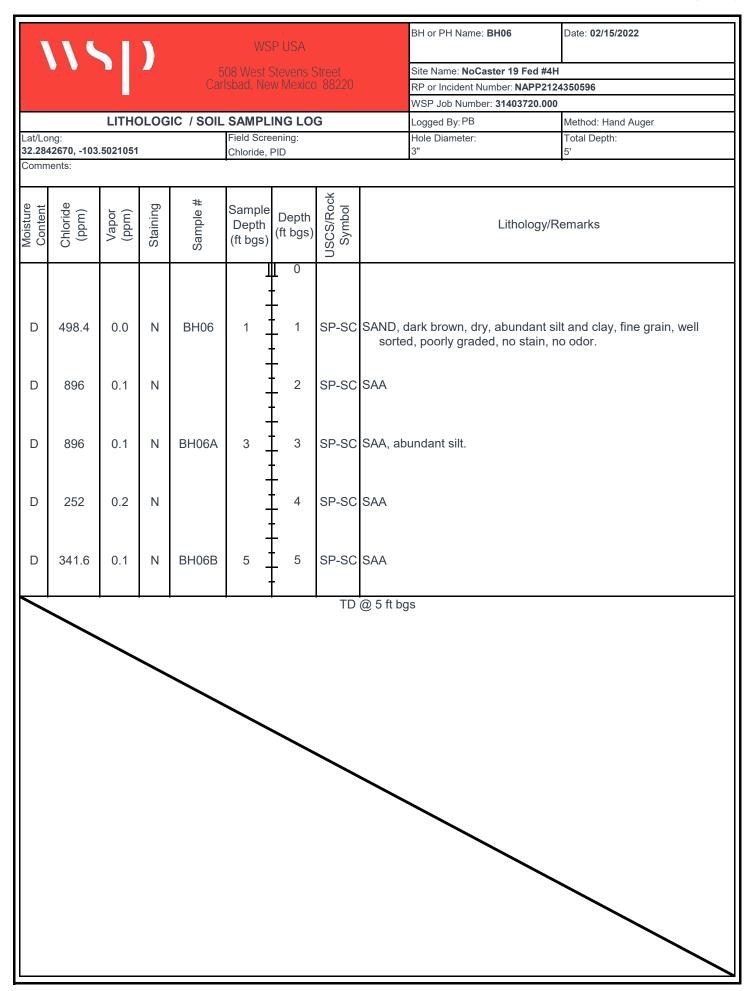
WSP USA								BH or PH Name: <b>BH01</b>		Date: 02/15/2022		
									Site Name: <b>NoCaster</b> '			
- Control of the Cont									WSP Job Number: <b>31403720.000</b>			
LITHOLOGIC / SOIL SAMPLING LOG								Logged By: PB		Method: Hand Auger		
Lat/Le	ong: <b>34265, -103.</b> 5	02447			Field Scre				Hole Diameter: 3"		Total Depth:	
	ments:	002147			Chloride,	PID			3		5'	
	ı					1		1				
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bas)	USCS/Rock Symbol		Lit	thology/R	emarks	
D	823.2	1.3	N	BH01	1 1	0	SP-SC	SAND, o	lark brown, dry, ab d, poorly graded, n	undant sil o stain, n	lt and clay, fine grain, well o odor.	
D	2,312.8	1.2	N		- - - -	2	SP-SC			,		
D	1,646.4	1.6	N	BH01A	3 _	3	SP-SC	SAA, ab	undant silt			
D	1,232	1.2	N		- - - -	4	SP-SC	SAA				
D	823.2	1.3	N	BH01B	5	5	SP-SC					
							TD	@ 5 ft bo	IS			

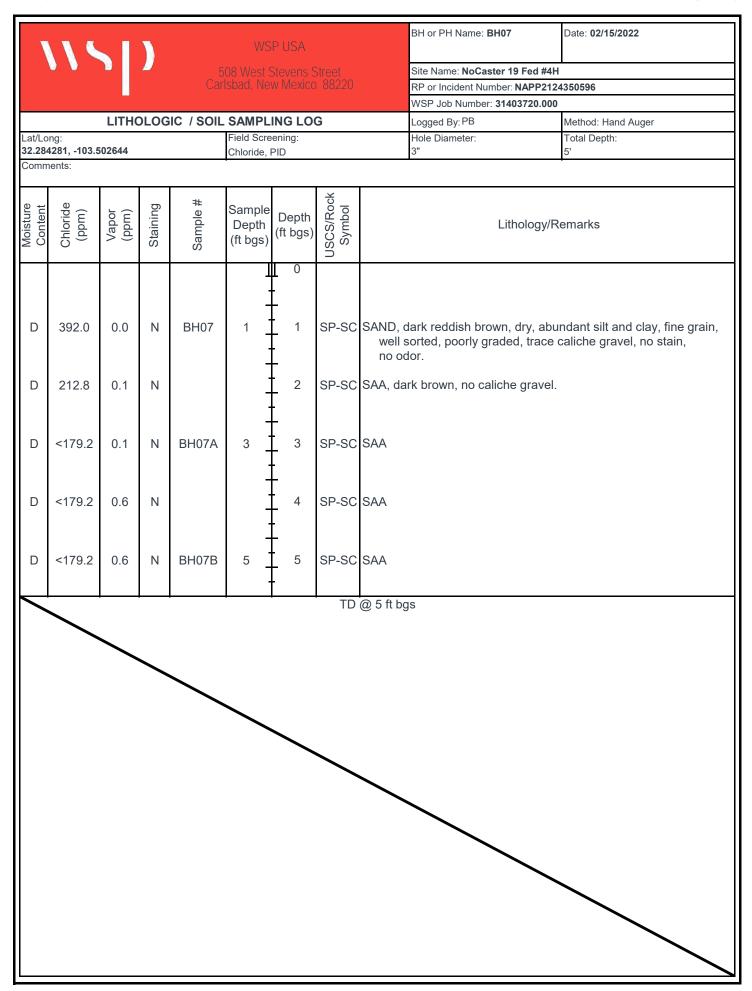
				WS	P USA			BH or PH Name: <b>BH02</b>	Date: <b>02/15/2022</b>		
110	7	J	5	na Mest 9	Stevens S	Street		Site Name: NoCaster 19 Fed	#4H		
			Carl	sbad, Ne	w Mexico	88220		RP or Incident Number: NAPP2124350596			
								WSP Job Number: <b>31403720.000</b>			
LITHOLOGIC / SOIL SAMPLING LOG							Logged By: PB	Method: Hand Auger			
ong:								Hole Diameter:	Total Depth:		
	0286			Chloride,	PID			3"	5'		
nents:											
oride om)	por om)	ning	# eld		Deptil	3/Rock nbol		Litholog	v/Remarks		
Chia (P	Va (pp	Sta	Sam	(ft bgs)		USCS Syr		9	,		
				- -	<u> </u>						
296.8	0.9	N	BH02	1 <u>-</u>	1	SP-SC	SAND, d sorted	ark brown, dry, abundar d, poorly graded, no stai	nt silt and clay, fine grain, well n, no odor.		
<179.2	1.3	N		- - -	2	SP-SC	SAA				
<179.2	1.1	N	BH02A	3 _	- _ 3	SP-SC	SAA				
<179.2	1.2	N		- - -	4	SP-SC	SAA				
<179.2	1.0	N	BH02B	5	_ 5	SP-SC	SAA				
<u> </u>						TD	@ 5 ft bg	 S			
	ong: 4085, -103.5 nents:	LITHO (ang: 4085, -103.50286 ments:	LITHOLOG ong: 4085, -103.50286 nents:  Piology (mdd)  296.8 0.9 N  <179.2 1.3 N  <179.2 1.1 N  <179.2 1.2 N	LITHOLOGIC / SOIL  ong: 4085, -103.50286  nents:  Piologic (wdd)  296.8 0.9 N BH02  <179.2 1.3 N  <179.2 1.1 N BH02A  <179.2 1.2 N	Carlsbad, Ne   Carlsbad, Ne	Sold West Stevens Start   Carlsbad, New Mexico	Carlsbad, New Mexico 88220   Field Screening: Chloride, PID   Chloride, PID	Substituting   Subs	LITHOLOGIC / SOIL SAMPLING LOG  Logged By: PB  Hole Diameter:  Sample Depth (ft bgs)  Og O		

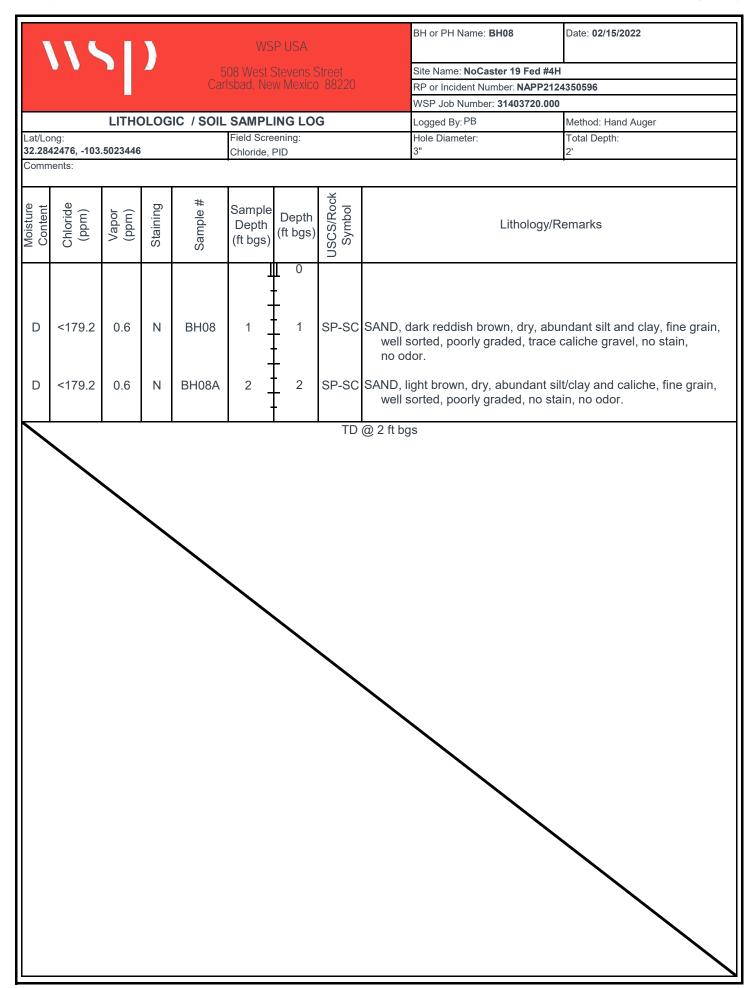


7	,,,		1		WS	P USA			BH or PH Name: <b>BH04</b>		Date: 02/15/2022
,			5	na Mest f	Stevens S	Site Name: <b>NoCaster 19</b>	Fed #4H				
				Carl	08 West S Isbad, Ne	w Mexico	88220		RP or Incident Number: NAPP2124350596		
-								WSP Job Number: <b>31403720.000</b>			
		LITHO	DLOG	IC / SOIL	SAMPL	ING LO	G		Logged By: PB		Method: Hand Auger
Lat/Lo	Lat/Long: Field Screening:							Hole Diameter:		Total Depth:	
	4284, -103.5 nents:	502588			Chloride, I	PID			3"		5'
Comi	nents.										
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	(ft bas)	USCS/Rock Symbol		Lith	ology/R	emarks
D	1,764	1.2	N	BH04	1 - 1	0					ndant silt and clay, fine grain,
D	832.2	1.3	N		-   -   -	2	SP-SC	no oc			caliche gravel, no stain,
D	<179.2	0.6	N	BH04A	3 _	3	SP-SC	SAA			
D	<179.2	1.3	Ν		- - - -	4	SP-SC	SAA			
D	<179.2	1.3	N	BH04B	5	5	SP-SC	SAA			
	<u>.                                    </u>				<u> </u>	<u></u>	TD	@ 5 ft bo	JS		









## **Environment Testing America**

## **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1546-1

Laboratory Sample Delivery Group: 31402909.16 Client Project/Site: NoCaster 19 Federal 004h

For:

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

Attn: Kalei Jennings

JURAMER

Authorized for release by: 11/15/2021 3:48:00 PM

Jessica Kramer, Project Manager (432)704-5440

jessica.kramer@eurofinset.com

.....LINKS

Review your project results through



Visit us at:

www.eurofinsus.com/Env
Released to Imaging: 8/1/2022 3:57:10 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.

1

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3

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6

10

12

13

Client: WSP USA Inc.

Laboratory Job ID: 890-1546-1

Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

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10

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## **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1546-1 Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

## **Qualifiers**

**GC VOA** 

Qualifier **Qualifier Description** 

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

**GC Semi VOA** 

Qualifier **Qualifier Description** 

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 Ego	Dilution Factor

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) Most Probable Number MPN MQL Method Quantitation Limit

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

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

**TNTC** Too Numerous To Count

## **Case Narrative**

Client: WSP USA Inc. Job ID: 890-1546-1 Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

Job ID: 890-1546-1

Laboratory: Eurofins Xenco, Carlsbad

Narrative

Job Narrative 890-1546-1

## Receipt

The samples were received on 11/8/2021 4:15 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 1.4°C

## **GC VOA**

Method 8021B: Surrogate recovery for the following sample was outside control limits: (MB 880-11824/5-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

## GC Semi VOA

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

## HPLC/IC

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

## **Client Sample Results**

Client: WSP USA Inc.

Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

Client Commission 10: 0004

Client Sample ID: SS01

Date Collected: 11/05/21 15:53

Matrix: Solid

Date Received: 11/08/21 16:15

Sample Depth: 0.5 - .

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 15:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 15:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 15:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		11/10/21 09:30	11/10/21 15:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 15:53	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		11/10/21 09:30	11/10/21 15:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	123		70 - 130			11/10/21 09:30	11/10/21 15:53	1
1,4-Difluorobenzene (Surr)	90		70 - 130			11/10/21 09:30	11/10/21 15:53	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			11/15/21 14:07	1
Analyte		Qualifier						Dil Fac
T-4-LTDU			RL	Unit	D	Prepared	Analyzed	
Total TPH	4290		49.8	mg/Kg			11/11/21 15:24	
Method: 8015B NM - Diesel Ran	ge Organics (D		49.8	mg/Kg		<u> </u>	11/11/21 15:24	1
Method: 8015B NM - Diesel Ran Analyte	ge Organics (D	Qualifier	49.8 <b>RL</b>	mg/Kg		Prepared	11/11/21 15:24 Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D	Qualifier	49.8	mg/Kg		<u> </u>	11/11/21 15:24	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D	Qualifier	49.8 <b>RL</b>	mg/Kg		Prepared	11/11/21 15:24 Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10	ge Organics (D Result <49.8	Qualifier U	49.8  RL 49.8	mg/Kg  Unit  mg/Kg		Prepared 11/11/21 08:21	11/11/21 15:24  Analyzed  11/11/21 16:48	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D Result <49.8 4290 <49.8	Qualifier U	49.8  RL 49.8  49.8	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/11/21 08:21 11/11/21 08:21 11/11/21 08:21	Analyzed 11/11/21 15:24  Analyzed 11/11/21 16:48 11/11/21 16:48	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	ge Organics (D Result <49.8	Qualifier U	49.8 RL 49.8 49.8 49.8	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/11/21 08:21 11/11/21 08:21	11/11/21 15:24  Analyzed  11/11/21 16:48  11/11/21 16:48	Dil Face
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	ge Organics (D Result <49.8 4290 <49.8 %Recovery	Qualifier U	49.8  RL 49.8  49.8  49.8  Limits	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/11/21 08:21 11/11/21 08:21 11/11/21 08:21 Prepared	Analyzed 11/11/21 15:24  Analyzed 11/11/21 16:48 11/11/21 16:48 Analyzed	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	ge Organics (D Result <49.8  4290  <49.8  **Mecovery**  93  77	Qualifier  U  U  Qualifier	49.8  49.8  49.8  49.8  49.8  Limits  70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/11/21 08:21 11/11/21 08:21 11/11/21 08:21 Prepared 11/11/21 08:21	Analyzed 11/11/21 16:48 11/11/21 16:48 11/11/21 16:48 Analyzed 11/11/21 16:48	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	ge Organics (D  Result  <49.8  4290  <49.8  **Recovery  93  77  omatography -	Qualifier  U  U  Qualifier	49.8  49.8  49.8  49.8  49.8  Limits  70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 11/11/21 08:21 11/11/21 08:21 11/11/21 08:21 Prepared 11/11/21 08:21	Analyzed 11/11/21 16:48 11/11/21 16:48 11/11/21 16:48 Analyzed 11/11/21 16:48	Dil Fac

Client Sample ID: SS02

Date Collected: 11/05/21 15:55

Lab Sample ID: 890-1546-2

Matrix: Solid

Date Collected: 11/05/21 15:55 Date Received: 11/08/21 16:15

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		11/10/21 09:30	11/10/21 16:13	1
Toluene	<0.00202	U	0.00202	mg/Kg		11/10/21 09:30	11/10/21 16:13	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		11/10/21 09:30	11/10/21 16:13	1
m-Xylene & p-Xylene	<0.00403	U	0.00403	mg/Kg		11/10/21 09:30	11/10/21 16:13	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		11/10/21 09:30	11/10/21 16:13	1
Xylenes, Total	<0.00403	U	0.00403	mg/Kg		11/10/21 09:30	11/10/21 16:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			11/10/21 09:30	11/10/21 16:13	

Client: WSP USA Inc.

Job ID: 890-1546-1

11/11/21 08:21 11/11/21 17:09

Project/Site: NoCaster 19 Federal 004h SDG: 31402909.16

**Client Sample ID: SS02** Lab Sample ID: 890-1546-2 Matrix: Solid

Date Collected: 11/05/21 15:55 Date Received: 11/08/21 16:15

Sample Depth: 0.5

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	106	70 - 130	11/10/21 09:30	11/10/21 16:13	1

Mathad:	Total	RTFY.	. Total	RTEY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00403	U	0.00403	mg/Kg			11/15/21 14:07	1

Mothod: 8015 NM -	Diosal Range	Organice	(DRO) (GC)

Analyte	Result Qualifie	er RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	151	49.9	mg/Kg			11/11/21 15:24	1

Mothod: 004ED	NM - Diesel Ran	as Orasnico	
Melliou, ou lab	NIVI - Diesei Kan	ue Organics	IDKUI IGGI

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		11/11/21 08:21	11/11/21 17:09	1
Diesel Range Organics (Over C10-C28)	151		49.9	mg/Kg		11/11/21 08:21	11/11/21 17:09	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		11/11/21 08:21	11/11/21 17:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

1-Chlorooctane	104	70 - 130
o-Terphenyl	108	70 - 130

o-Terphenyl	108	70 - 130	11/11/21 08:21	11/11/21 17:09	1
Method: 300.0 - Anions, Ion Chromatograph	hy - Soluble				

wethod: 300.0 - Anions, ion	Chromatography - Soluble
Analyte	Result Qualifier

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1330	4.98	mg/Kg		_	11/14/21 01:39	1

**Client Sample ID: SS03** Lab Sample ID: 890-1546-3 **Matrix: Solid** 

Date Collected: 11/05/21 15:57 Date Received: 11/08/21 16:15

Sample Depth: 0.5

Method: 8021B -	Volatile Organ	ic Compounds	s (GC)
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		/						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		11/10/21 09:30	11/10/21 18:02	1
Toluene	<0.00199	U	0.00199	mg/Kg		11/10/21 09:30	11/10/21 18:02	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		11/10/21 09:30	11/10/21 18:02	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		11/10/21 09:30	11/10/21 18:02	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		11/10/21 09:30	11/10/21 18:02	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		11/10/21 09:30	11/10/21 18:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130			11/10/21 09:30	11/10/21 18:02	1
1,4-Difluorobenzene (Surr)	99		70 - 130			11/10/21 09:30	11/10/21 18:02	1

Method:	Total	RTFX	- Total	RTFX	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	ma/Ka			11/15/21 14:07	1

Method: 8015 NM - Dies	el Range Organics (DRO)	(GC)

Analyte	•	•	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			65.3		50.0	mg/Kg			11/11/21 15:24	1

Client: WSP USA Inc. Job ID: 890-1546-1

Project/Site: NoCaster 19 Federal 004h SDG: 31402909.16

**Client Sample ID: SS03** Lab Sample ID: 890-1546-3

Date Collected: 11/05/21 15:57 Matrix: Solid Date Received: 11/08/21 16:15

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 17:30	1
Diesel Range Organics (Over C10-C28)	65.3		50.0	mg/Kg		11/11/21 08:21	11/11/21 17:30	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 17:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130			11/11/21 08:21	11/11/21 17:30	1
o-Terphenyl	104		70 - 130			11/11/21 08:21	11/11/21 17:30	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7310		49.5	mg/Kg			11/14/21 01:44	10

Client Sample ID: SS04 Lab Sample ID: 890-1546-4

Date Collected: 11/05/21 15:58 Matrix: Solid

Date Received: 11/08/21 16:15

Sample Depth: 0.5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		11/10/21 09:30	11/10/21 18:23	1
Toluene	<0.00201	U	0.00201	mg/Kg		11/10/21 09:30	11/10/21 18:23	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		11/10/21 09:30	11/10/21 18:23	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		11/10/21 09:30	11/10/21 18:23	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		11/10/21 09:30	11/10/21 18:23	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		11/10/21 09:30	11/10/21 18:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			11/10/21 09:30	11/10/21 18:23	1
1,4-Difluorobenzene (Surr)	98		70 - 130			11/10/21 09:30	11/10/21 18:23	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			11/15/21 14:07	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			11/11/21 15:24	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 17:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 17:51	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 17:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130			11/11/21 08:21	11/11/21 17:51	1
o-Terphenyl	105		70 - 130			11/11/21 08:21	11/11/21 17:51	1

## **Client Sample Results**

Client: WSP USA Inc.

Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

Client Sample ID: SS04 Lab Sample ID: 890-1546-4

Date Collected: 11/05/21 15:58

Matrix: Solid

Date Received: 11/08/21 16:15

Sample Depth: 0.5

Method: 300.0 - Anions, Ion Chromatography - Soluble								
	Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Chloride	11900	101	mg/Kg			11/14/21 01:49	20

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## **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-1546-1 Project/Site: NoCaster 19 Federal 004h SDG: 31402909.16

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-8100-A-21-A MS	Matrix Spike	113	102	
880-8100-A-21-B MSD	Matrix Spike Duplicate	117	104	
890-1546-1	SS01	123	90	
890-1546-2	SS02	120	106	
890-1546-3	SS03	107	99	
890-1546-4	SS04	110	98	
LCS 880-11824/1-A	Lab Control Sample	112	102	
LCSD 880-11824/2-A	Lab Control Sample Dup	108	101	
MB 880-11824/5-A	Method Blank	62 S1-	111	
Surrogate Legend				
BFB = 4-Bromofluorobei	nzene (Surr)			

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

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

idirix. Cond				Trop Type: Totalin
-				Percent Surrogate Recovery (Acceptance Limits)
		1001	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-1546-1	SS01	93	77	
890-1546-2	SS02	104	108	
890-1546-3	SS03	100	104	
890-1546-4	SS04	102	105	
890-1555-A-1-D MS	Matrix Spike	100	99	
LCS 880-11990/2-A	Lab Control Sample	84	93	
LCSD 880-11990/3-A	Lab Control Sample Dup	83	86	
MB 880-11990/1-A	Method Blank	106	127	
Surrogate Legend				
1CO = 1-Chlorooctane				
OTPH = o-Terphenyl				

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

Matrix: Solid Prep Type: Total/NA

_			Percent Surrogate Recovery (Acceptance Limits)			
		1CO1	OTPH1			
Lab Sample ID	Client Sample ID					
890-1555-A-1-E MSD	Matrix Spike Duplicate					
Surrogate Legend						
1CO = 1-Chlorooctane						

Eurofins Xenco, Carlsbad

OTPH = o-Terphenyl

Client: WSP USA Inc. Job ID: 890-1546-1 Project/Site: NoCaster 19 Federal 004h SDG: 31402909.16

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-11824/5-A

Lab Sample ID: LCS 880-11824/1-A

**Matrix: Solid Analysis Batch: 11888**  Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 11824

	MB	MR						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
Toluene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		11/10/21 09:30	11/10/21 12:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		11/10/21 09:30	11/10/21 12:41	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	62	S1-	70 - 130	11/10/21 09:3	30 11/10/21 12:41	1
1,4-Difluorobenzene (Surr)	111		70 - 130	11/10/21 09:	30 11/10/21 12:41	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Matrix: Solid Analysis Batch: 11888** Prep Batch: 11824 LCS LCS Spike Added Result Qualifier Unit %Rec Limits 0.100 0.09671 mg/Kg 97 70 - 130

Analyte Benzene Toluene 0.100 0.1024 mg/Kg 102 70 - 130 0.100 Ethylbenzene 0.1078 mg/Kg 108 70 - 130 0.200 107 70 - 130 m-Xylene & p-Xylene 0.2145 mg/Kg 0.100 0.1036 70 - 130 o-Xylene mg/Kg 104

LCS LCS

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

Lab Sample ID: LCSD 880-11824/2-A **Client Sample ID: Lab Control Sample Dup** 

**Matrix: Solid** 

**Analysis Batch: 11888** 

Prep Type: Total/NA Prep Batch: 11824

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09531		mg/Kg		95	70 - 130	1	35
Toluene	0.100	0.1010		mg/Kg		101	70 - 130	1	35
Ethylbenzene	0.100	0.1067		mg/Kg		107	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2085		mg/Kg		104	70 - 130	3	35
o-Xylene	0.100	0.1005		mg/Kg		100	70 - 130	3	35

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	108	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: 880-8100-A-21-A MS

**Matrix: Solid** 

**Analysis Batch: 11888** 

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

Prep Batch: 11824

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0998	0.08923		mg/Kg		89	70 - 130	
Toluene	<0.00200	U	0.0998	0.09624		mg/Kg		95	70 - 130	

Eurofins Xenco, Carlsbad

Prep Batch: 11824

# **QC Sample Results**

Client: WSP USA Inc. Job ID: 890-1546-1 Project/Site: NoCaster 19 Federal 004h SDG: 31402909.16

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

Lab Sample ID: 880-8100-A-21-A MS Client Sample ID: Matrix Spike Prep Type: Total/NA

**Matrix: Solid** 

**Analysis Batch: 11888** 

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Ethylbenzene	<0.00200	U	0.0998	0.1020		mg/Kg		102	70 - 130	
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1997		mg/Kg		99	70 - 130	
o-Xylene	<0.00200	U	0.0998	0.09858		mg/Kg		98	70 - 130	

MS MS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	113	70 - 130
1,4-Difluorobenzene (Surr)	102	70 - 130

Lab Sample ID: 880-8100-A-21-B MSD **Client Sample ID: Matrix Spike Duplicate** Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 11888									Prep	Batch:	11824
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.100	0.08626		mg/Kg		86	70 - 130	3	35
Toluene	<0.00200	U	0.100	0.09392		mg/Kg		93	70 - 130	2	35
Ethylbenzene	<0.00200	U	0.100	0.09454		mg/Kg		95	70 - 130	8	35
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1841		mg/Kg		91	70 - 130	8	35
o-Xylene	<0.00200	U	0.100	0.08863		mg/Kg		88	70 - 130	11	35

MSD MSD

MB

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	117		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

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

Lab Sample ID: MB 880-11990/1-A

**Matrix: Solid** 

Analysis Batch: 11992

	Client Sample ID: Method Blank
	Prep Type: Total/NA
	Prep Batch: 11990
s MB	

ı									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 09:47	1
	(GRO)-C6-C10								
	Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 09:47	1
	C10-C28)								
	OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		11/11/21 08:21	11/11/21 09:47	1
ı									

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130	11/11/21 08:21	11/11/21 09:47	1
o-Terphenyl	127		70 - 130	11/11/21 08:21	11/11/21 09:47	1

Lab Sample ID: LCS 880-11990/2-A

Matrix: Solid							Prep Ty	/pe: Total	/NA
Analysis Batch: 11992							Prep Batch: 119		990
	Spike	LCS	LCS				%Rec.		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	1000	895.5		mg/Kg		90	70 - 130		
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	900.5		mg/Kg		90	70 - 130		
C10-C28)									

Eurofins Xenco, Carlsbad

**Client Sample ID: Lab Control Sample** 

Job ID: 890-1546-1 Client: WSP USA Inc.

Project/Site: NoCaster 19 Federal 004h SDG: 31402909.16

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

Lab Sample ID: LCS 880-11990/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** 

Prep Type: Total/NA **Analysis Batch: 11992** Prep Batch: 11990

	LCS LCS	
Surrogate	%Recovery Qualifie	r Limits
1-Chlorooctane	84	70 - 130
o-Terphenyl	93	70 - 130

Lab Sample ID: LCSD 880-11990/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 11992 Prep Batch: 11990

Spike LCSD LCSD %Rec. RPD Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 70 - 130 1000 918.9 92 3 20 Gasoline Range Organics mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 1000 870.9 mg/Kg 87 70 - 1303 20 C10-C28)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	86		70 - 130

Lab Sample ID: 890-1555-A-1-D MS Client Sample ID: Matrix Spike

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

**Analysis Batch: 11992** Prep Batch: 11990 Sample Sample Cnika Me Me

	Sample	Sample	Spike	IVIO	IVIO				/οRec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<50.0	U	997	1100		mg/Kg		108	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	997	793.8		mg/Kg		77	70 - 130		
C10-C28)											

MS MS %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 100 o-Terphenyl 99 70 - 130

Lab Sample ID: 890-1555-A-1-E MSD Client Sample ID: Matrix Spike Duplicate

**Matrix: Solid** Prep Type: Total/NA Analysis Batch: 11992 Prep Batch: 11990

Sample Sample MSD MSD %Rec. RPD Spike

Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	<50.0	U	998	1148		mg/Kg					
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U	998	849.1		ma/Ka					

MSD MSD

Surrogate %Recovery Qualifier Limits

1-Chlorooctane o-Terphenyl

Eurofins Xenco, Carlsbad

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C10-C28)

# QC Sample Results

Client: WSP USA Inc. Job ID: 890-1546-1 Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-12129/1-A

**Matrix: Solid** 

**Analysis Batch: 12200** 

Analyte

Chloride

Client Sample ID: Method Blank **Prep Type: Soluble** 

мв мв Dil Fac Result Qualifier RL Unit D Prepared Analyzed <5.00 U 5.00 mg/Kg 11/14/21 01:05

Lab Sample ID: LCS 880-12129/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 12200** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 247.4 mg/Kg 99 90 - 110

Lab Sample ID: LCSD 880-12129/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 12200** 

LCSD LCSD %Rec. RPD Spike Analyte Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 249.3 mg/Kg 100 90 - 110

Lab Sample ID: 880-8171-A-1-G MS Client Sample ID: Matrix Spike **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 12200** 

MS MS Sample Sample Spike %Rec. Analyte Result Qualifier Added Result Qualifier %Rec Unit Limits Chloride 85.1 250 321.0 90 - 110 mg/Kg

Lab Sample ID: 880-8171-A-1-H MSD

**Matrix: Solid** 

Analysis Batch: 12200

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 250 85.1 318.3 mg/Kg 93 90 - 110 20

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Client Sample ID: Matrix Spike Duplicate

**Prep Type: Soluble** 

# **QC Association Summary**

Client: WSP USA Inc.

Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

**GC VOA** 

Prep Batch: 11824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Total/NA	Solid	5035	
890-1546-2	SS02	Total/NA	Solid	5035	
890-1546-3	SS03	Total/NA	Solid	5035	
890-1546-4	SS04	Total/NA	Solid	5035	
MB 880-11824/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-11824/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-11824/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-8100-A-21-A MS	Matrix Spike	Total/NA	Solid	5035	
880-8100-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

**Analysis Batch: 11888** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Total/NA	Solid	8021B	11824
890-1546-2	SS02	Total/NA	Solid	8021B	11824
890-1546-3	SS03	Total/NA	Solid	8021B	11824
890-1546-4	SS04	Total/NA	Solid	8021B	11824
MB 880-11824/5-A	Method Blank	Total/NA	Solid	8021B	11824
LCS 880-11824/1-A	Lab Control Sample	Total/NA	Solid	8021B	11824
LCSD 880-11824/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	11824
880-8100-A-21-A MS	Matrix Spike	Total/NA	Solid	8021B	11824
880-8100-A-21-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	11824

**Analysis Batch: 12338** 

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Total/NA	Solid	Total BTEX	
890-1546-2	SS02	Total/NA	Solid	Total BTEX	
890-1546-3	SS03	Total/NA	Solid	Total BTEX	
890-1546-4	SS04	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 11990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Total/NA	Solid	8015NM Prep	
890-1546-2	SS02	Total/NA	Solid	8015NM Prep	
890-1546-3	SS03	Total/NA	Solid	8015NM Prep	
890-1546-4	SS04	Total/NA	Solid	8015NM Prep	
MB 880-11990/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-11990/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-11990/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1555-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1555-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 11992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Total/NA	Solid	8015B NM	11990
890-1546-2	SS02	Total/NA	Solid	8015B NM	11990
890-1546-3	SS03	Total/NA	Solid	8015B NM	11990
890-1546-4	SS04	Total/NA	Solid	8015B NM	11990
MB 880-11990/1-A	Method Blank	Total/NA	Solid	8015B NM	11990
LCS 880-11990/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	11990

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# **QC Association Summary**

Client: WSP USA Inc. Job ID: 890-1546-1 Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

# GC Semi VOA (Continued)

# **Analysis Batch: 11992 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-11990/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	11990
890-1555-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	11990
890-1555-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	11990

#### Analysis Batch: 12045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Total/NA	Solid	8015 NM	
890-1546-2	SS02	Total/NA	Solid	8015 NM	
890-1546-3	SS03	Total/NA	Solid	8015 NM	
890-1546-4	SS04	Total/NA	Solid	8015 NM	

#### **HPLC/IC**

#### Leach Batch: 12129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Soluble	Solid	DI Leach	_
890-1546-2	SS02	Soluble	Solid	DI Leach	
890-1546-3	SS03	Soluble	Solid	DI Leach	
890-1546-4	SS04	Soluble	Solid	DI Leach	
MB 880-12129/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-12129/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-12129/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-8171-A-1-G MS	Matrix Spike	Soluble	Solid	DI Leach	
880-8171-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

#### **Analysis Batch: 12200**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1546-1	SS01	Soluble	Solid	300.0	12129
890-1546-2	SS02	Soluble	Solid	300.0	12129
890-1546-3	SS03	Soluble	Solid	300.0	12129
890-1546-4	SS04	Soluble	Solid	300.0	12129
MB 880-12129/1-A	Method Blank	Soluble	Solid	300.0	12129
LCS 880-12129/2-A	Lab Control Sample	Soluble	Solid	300.0	12129
LCSD 880-12129/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	12129
880-8171-A-1-G MS	Matrix Spike	Soluble	Solid	300.0	12129
880-8171-A-1-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	12129

Eurofins Xenco, Carlsbad

Client: WSP USA Inc.

Project/Site: NoCaster 19 Federal 004h

Job ID: 890-1546-1

SDG: 31402909.16

**Client Sample ID: SS01** 

Date Received: 11/08/21 16:15

Date Collected: 11/05/21 15:53

Lab Sample ID: 890-1546-1

**Matrix: Solid** 

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab 5035 Total/NA Prep 5.01 g 5 mL 11824 11/10/21 09:30 KL XEN MID 8021B Total/NA Analysis 1 5 mL 5 mL 11888 11/10/21 15:53 MR XEN MID Total/NA Analysis Total BTEX 12338 11/15/21 14:07 ΑJ XEN MID Total/NA 8015 NM XEN MID Analysis 1 12045 11/11/21 15:24 AJ Total/NA 8015NM Prep 10 mL 11990 11/11/21 08:21 XEN MID Prep 10.04 g DM Total/NA Analysis 8015B NM 11992 11/11/21 16:48 AJ XEN MID Soluble DI Leach 5.05 g 50 mL 12129 11/12/21 12:28 СН XEN MID Leach Soluble Analysis 300.0 12200 11/14/21 01:34 CH XEN MID

Client Sample ID: SS02

Date Collected: 11/05/21 15:55

Date Received: 11/08/21 16:15

Lab Sample ID: 890-1546-2

**Matrix: Solid** 

	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	11824	11/10/21 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11888	11/10/21 16:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			12338	11/15/21 14:07	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12045	11/11/21 15:24	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	11990	11/11/21 08:21	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11992	11/11/21 17:09	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	12129	11/12/21 12:28	CH	XEN MID
Soluble	Analysis	300.0		1			12200	11/14/21 01:39	CH	XEN MID

**Client Sample ID: SS03** 

Date Collected: 11/05/21 15:57 Date Received: 11/08/21 16:15

Lab Sample ID: 890-1546-3

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	11824	11/10/21 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11888	11/10/21 18:02	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			12338	11/15/21 14:07	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			12045	11/11/21 15:24	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	11990	11/11/21 08:21	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11992	11/11/21 17:30	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	12129	11/12/21 12:28	CH	XEN MID
Soluble	Analysis	300.0		10			12200	11/14/21 01:44	CH	XEN MID

**Client Sample ID: SS04** 

Date Collected: 11/05/21 15:58 Date Received: 11/08/21 16:15

Lab Sample ID: 890-1546-4

Matrix: Solid

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	11824	11/10/21 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	11888	11/10/21 18:23	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			12338	11/15/21 14:07	AJ	XEN MID

Eurofins Xenco, Carlsbad

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# Lab Chronicle

Client: WSP USA Inc.

Job ID: 890-1546-1

Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

Client Sample ID: SS04 Lab Sample ID: 890-1546-4

Date Collected: 11/05/21 15:58

Matrix: Solid

Date Received: 11/08/21 16:15

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			12045	11/11/21 15:24	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	11990	11/11/21 08:21	DM	XEN MID
Total/NA	Analysis	8015B NM		1			11992	11/11/21 17:51	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	12129	11/12/21 12:28	CH	XEN MID
Soluble	Analysis	300.0		20			12200	11/14/21 01:49	CH	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: 890-1546-1 Project/Site: NoCaster 19 Federal 004h

SDG: 31402909.16

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

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

Authority	Pr	ogram	Identification Number	Expiration Date
Texas	NE	ELAP	T104704400-21-22	06-30-22
The following analytes the agency does not of	• •	it the laboratory is not certifi	ed by the governing authority. This list ma	ay include analytes fo
A ali india A A a Ala a al				
Analysis Method	Prep Method	Matrix	Analyte	
8015 NM	Prep Method	Matrix Solid	Analyte Total TPH	

# **Method Summary**

Client: WSP USA Inc.

Project/Site: NoCaster 19 Federal 004h

Job ID: 890-1546-1

SDG: 31402909.16

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

Eurofins Xenco, Carlsbad

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# **Sample Summary**

Client: WSP USA Inc.

Project/Site: NoCaster 19 Federal 004h

Job ID: 890-1546-1

SDG: 31402909.16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1546-1	SS01	Solid	11/05/21 15:53	11/08/21 16:15	0.5
890-1546-2	SS02	Solid	11/05/21 15:55	11/08/21 16:15	0.5
890-1546-3	SS03	Solid	11/05/21 15:57	11/08/21 16:15	0.5
890-1546-4	SS04	Solid	11/05/21 15:58	11/08/21 16:15	0.5

					Ch	ain	of C	Chain of Custody		Work Order No:	
×			Housto	n,TX (281) 240-420 nd TX <i>(</i> 432-704-54	00 Dallas	s,TX (21.	4) 902-00 (915)585	Houston.TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio.TX (210) 509-3334 Midland TX (433-704-5440) FI Pasc TX (915/585-3443   ubbock TX (806)/94-1296	33.4 36		
			lobbs,NM (575-39)	2-7550) Phoenix,A	Z (480-3	55-0900	) Atlanta	Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)	(813-620-2000)	www.xenco.com <sup>2</sup> age	ge1of1_
Project Manager:	Kalei Jennings			Bill to: (if different)	7	Kalei Jennings	nings			Work Order Comments	ents
	WSP USA			Company Name:		WSP USA	>		Program: UST/PST	PST	RC  superfund
	3300 North A Street Bldg 1, Unit 222	et Bldg 1, Uni	1 222	Address:		300 Nor	th A Str	3300 North A Street Bldg 1, Unit 222	State of Project:		
le ZIP:	Midland, Texas 79705	9705		City, State ZIP:		Midland, Texas 79705	Texas 7	79705	Reporting:Level II [] Level III	∏ST/UST	RRP evel IV
	817-683-2503		Emai	kalei jennings	@wsp	com, p	ayton.	Email: kalei.jennings@wsp.com, payton.benner@wsp.com	Deliverables: EDD	DD ADaPT	Other:
Name:	NoCaster 19 Federal 004H	eral 004H		Turn Around				ANALYSIS REQUEST	QUEST		Work Order Notes
er:	31.	31402909.16	Routine	tine							
P.O. Number:			Rush:			-			_		
ne:	Payton Benner		Due	Due Date:			_		= = = = = = = = = = = = = = = = = = =		
SAMPLE RECEIPT	PT Temp Blank:	<b>(</b>	No Wet Ice:	Kes No			_				
Temperature (°C):	1,6/1.	4	Thermometer ID	D	iners						
Received Intact:		\$ 8	NMOD	1 1					890-1546 Chain of Custody		
Sample Custody Seals:	Yes No		Total Containers:			-	-				lab, if received by 4:30pm
Sample Identification		Matrix Date Sampled	Time ed Sampled	Depth	Numbe	TPH (EF	BTEX (E			6	Sample Comments
SS01	S	11/05/21	6/21 15;53	0.5'	_		×				Discrete
SS02	S	11/05/21	/21 15:55	0.5		×	×				Discrete
\$\$03	S	11/05/21		0.5'	_	×	×			   	Discrete
SS04	S	11/05/21	15:58	0.5		×	×				Discrete
					111	+++					
Total 200.7 / 6010 Circle Method(s) a	otal 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	:0: be analyzed	8RCRA 13I TCLP/SF	RCRA 13PPM Texas 11 A	Al Sb RA Sb	As As	Ba Be Ba Be	B Cd Ca Cr Co Cd Cr Co Cu Pb	Cu Fe Pb Mg Mn Mo Ni Mn Mo Ni Se Ag Tl U	K Se Ag SiO2	Na Sr Ti Sn U V Zn 1631 / 245.1 / 7478 / 7471 : Hg
Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontract 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 loss of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$7 for each sample submitted to Xenco, but not analyzed. These terms will	cument and relinquist able only for the cost of ge of \$75.00 will be ap	nment of samples c of samples and shal plied to each projec	onstitutes a valid pu I not assume any re It and a charge of \$1	rchase order from c sponsibility for any 5 for each sample su	lient com	pany to I	Kenco, its is incurre		ors. It assigns standard terms and conditions es are due to circumstances beyond the control be enforced unless previously negotiated.	conditions d the control tiated.	
Relinquished by: (Signature)	(Signature)	n Receiv	Received by: (Signature)	иге)		Date/Time	ne		by: (Signature) R	Received by: (Signature)	Date/Time
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**Eurofins Xenco, Carlsbad** 

Environment Testing America

1089 N Canal St. Carisbad NM 88220 Phone 575-988-3199 Fax 575-988-3199 **Chain of Custody Record** 

	Sampler:			Lab PM	S		١	١		١			Carrie	r Trac	Carrier Tracking No(s)	lo(s)	ı	١	ٳ	OS No.	1		
Client Information (Sub Contract Lab)				Kran	Kramer Jessica	ssica	_													890-500 1			_
Shipping/Receiving	rnone			Jessic	E-Mail  essica.kramer@eurofinset.com	mer@	)euro	ofinse	¥.co	3			State New	State of Origin  New Mexico	8 3				<b>.</b> 11	Page Page 1 of 1			
Company Eurofins Xenco					Accreditations Required (See note): NELAP - Louisiana NELAP	P-L	s Requ	iired (	See n	Ap ete	e): P - Texas	īS							ا	Job #: 890-1546-1			
Address 1211 W Florida Ave	Due Date Requested 11/12/2021	ā							₽	nalv	alvsis Requested	Re	ues	ted	ı	l	ı		_	Preservation Codes	ode	1	
City: Midland	TAT Requested (days):	ys):			a Carllina Ma	torillin tra													mand	A HCL B NaOH C Zn Acetate			
State Ztp. TX, 79701																						P Na2O4S Q Na2SO3	-
Phone. 432-704-5440(Tel)	PO#:				)	трн	ie											a selector deliver	I.	G Amchlor			
Email·	WO#				CINCOLONIA C	AMPROX ONSIG	Chloric											- y-Jeman	286.00.00	l Ice J Di Water		U Acetone V-MCAA	
Project Name: NoCaster 19 Federal 004h	Project #: 89000048				constraints and	000000000000000000000000000000000000000	ACH	EX											522. H.Uch	K EDTA		W pH 4-5 Z other (specify)	
Site	SSOW#				STATISTICS OF STREET	2007/2000-200	/DI_LI	ic BT											2. 2. 16.90	Other:			
						-AMERICA	28D/I	_Cal	3CV	lc								/ · · · · ·	er of				
			Sample Type	Matrix (w=water S=solid,	i Filtere om MS/	MOD_NM	ORGFM_	B/5035FF	_BTEX_C	MOD_Cal									Numbe				
Sample Identification - Client ID (Lab ID)	Sample Date	Time	11	BT=Tissue, A=Air)	C MINISTER OF	1000000	300_	802	Tota	8018	September 19 Septe	Section (Section )	American Security of the Control of	Confess		1			Tota	Specia	lins	Special Instructions/Note:	4
		15.53	Preservation Code:	on Code:	X			in the second	-color		L		i i	i de la constante de la consta	L		-		×		I		Eustas
SS01 (890-1546-1)	11/5/21	Mountain		Solid		×	×	×	×	×								,	- 100 miles				
SS02 (890-1546-2)	11/5/21	15 55 Mountain		Solid		×	×	×	×	×									4				
SS03 (890-1546-3)	11/5/21	15 57 Mountain		Solid		×	×	×	×	×									ا و <b>الس</b> ور				
SS04 (890-1546-4)	11/5/21	15 58 Mountain		Solid		×	×	×	×	×									الخفيو				
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.	places the ownership opening analyzed the sa being analyzed the sa e signed Chain of Cus	of method and mples must bu stody attesting	alyte & accredita s shipped back t to said complica	ition complianc to the Eurofins ance to Eurofin	e upon Xenco s Xenc	out su LLC la o LLC.	bcontr	act lai	borato other i	nies nstruc	This s	ample will be	shipr	nent is ded. /	forwa	ırded ı anges	ınder to açı	chain credita	of-cu	stody If the lab	orator	ry does not currently ght to Eurofins Xenco LLC	
Possible Hazard Identification Unconfirmed					S	Sample Disposal ( A f	le Disposal (A f	posa 7 To			may	⊔be a	sses	sed	assessed if san Disposal By Lab	nple	s are	iet	aine	ee may be assessed if samples are retained longer than 1 month)	nin	month)	
Deliverable Requested I II III IV Other (specify)	Primary Deliverable Rank	ble Rank 2	10		Ş	Special Instructions/QC	Instr	uctio	ns/Q		Requirements	eme	ıts		ľ								
Empty Kit Relinquished by		Date			Time		≥		l		ı			Meth	Method of Shipment:	Shipm	ent:						
Relinquished by () (NO Ode 11.9.2)	Date/Time		0	Company		Rec	Receive	2	B	1	[2	2	10	ſ		Date/	ime	Ō١	V			Company	
Relinquished by	Date/Time			Company		Recei	e	by.			K					Date/Time	Time:			5		Company	
Relinquished by	Date/Time <sup>-</sup>			Company		Rec	Received by:	·Vc								Date/Time <sup>.</sup>	Time:					Company	
Custody Seals Intact: Custody Seal No						C00	Cooler Temperature(s) °C and Other Remarks.	npera	ture(s	)°Ca	nd Oth	er Re	marks	Ŵ	2	Y	W	N	M				

Ver 06/08/2021

# **Login Sample Receipt Checklist**

Client: WSP USA Inc. Job Number: 890-1546-1 SDG Number: 31402909.16

Login Number: 1546 List Source: Eurofins Xenco, Carlsbad

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: 890-1546-1

 SDG Number: 31402909.16

Course Function Vanca Midland

List Source: Eurofins Xenco, Midland
List Number: 2
List Creation: 11/10/21 11:22 AM

Creator: Kramer, Jessica

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	3.8/3.9
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").	N/A	

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# **Environment Testing America**

# **ANALYTICAL REPORT**

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

Laboratory Job ID: 890-1960-1

Laboratory Sample Delivery Group: 31402309.16

Client Project/Site: NoCaster 19

For:

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

Attn: Kalei Jennings

JURAMER

Authorized for release by: 2/28/2022 7:37:43 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: 8/1/2022 3:57:10 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. Laboratory Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

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# **Definitions/Glossary**

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

**Qualifiers** 

# **GC VOA**

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

#### **GC Semi VOA**

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.
HDI C/IC	

#### HPLC/IC

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

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)

LUQ	LITTIL OF QUANTILATION (DOD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit

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)
שוו	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)

	 aa,
D.	 

KL	Reporting Limit of Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference

RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Carlsbad** 

#### **Case Narrative**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Job ID: 890-1960-1

**Laboratory: Eurofins Carlsbad** 

Narrative

Job Narrative 890-1960-1

#### Receipt

The samples were received on 2/16/2022 11:07 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was  $2.4^{\circ}$ C

#### GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19724 and analytical batch 880-20289 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### GC Semi VOA

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-19826 and analytical batch 880-19863 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10 and Diesel Range Organics (Over C10-C28)

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-19826 and analytical batch 880-19863 were outside control limits.

Method 8015MOD\_NM: Surrogate recovery for the following sample was outside control limits: (LCS 880-19826/2-A). Evidence of matrix interferences is not obvious.

Method 8015MOD\_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-19794 and analytical batch 880-19891 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28)

Method 8015MOD\_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19794 and analytical batch 880-19891 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### 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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Lab Sample ID: 890-1960-1

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH01

Date Collected: 02/15/22 11:42 Date Received: 02/16/22 11:07

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 22:38	
Toluene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 22:38	•
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 22:38	
m-Xylene & p-Xylene	<0.00397	U F1	0.00397	mg/Kg		02/18/22 09:30	02/25/22 22:38	
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 22:38	1
Xylenes, Total	<0.00397	U F1	0.00397	mg/Kg		02/18/22 09:30	02/25/22 22:38	,
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130			02/18/22 09:30	02/25/22 22:38	1
1,4-Difluorobenzene (Surr)	98		70 - 130			02/18/22 09:30	02/25/22 22:38	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			02/28/22 18:47	1
Analyte Total TPH	113	Qualifier	<b>RL</b> 50.0	mg/Kg	D	Prepared	Analyzed 02/28/22 20:00	Dil Fa
Total TPH	113		50.0	mg/Kg			02/28/22 20:00	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	50.0	mg/Kg		02/18/22 09:15	02/21/22 11:42	1
Diesel Range Organics (Over C10-C28)	113	*1 F1	50.0	mg/Kg		02/18/22 09:15	02/21/22 11:42	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 11:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130			02/18/22 09:15	02/21/22 11:42	1
o-Terphenyl	113		70 - 130			02/18/22 09:15	02/21/22 11:42	1
Method: 300.0 - Anions, Ion Chro	0 . ,							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
				mg/Kg				5

Client Sample ID: BH01A Lab Sample ID: 890-1960-2

Date Collected: 02/15/22 11:54 Date Received: 02/16/22 11:07

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:59	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:59	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/18/22 09:30	02/25/22 22:59	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:59	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/18/22 09:30	02/25/22 22:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		70 - 130			02/18/22 09:30	02/25/22 22:59	1

**Eurofins Carlsbad** 

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Matrix: Solid

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH01A

Date Collected: 02/15/22 11:54

Lab Sample ID: 890-1960-2

Matrix: Solid

Date Collected: 02/15/22 11:54
Date Received: 02/16/22 11:07

Sample Depth: 3

Method: 8021B - Volatile Organic Compound	s (GC) (Continued)
---	--------------------

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	95	70 - 130	02/18/22 09:30	02/25/22 22:59	1

Method: To	otal BTFX - To	otal BTEX Cal	culation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			02/28/22 18:47	1

Mothod: 8015 NM -	Diesal Pance	Organics (DRO) ((	201

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			02/28/22 20:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 12:44	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 12:44	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 12:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	02/18/22 09:15	02/21/22 12:44	1
o-Terphenyl	106		70 - 130	02/18/22 09:15	02/21/22 12:44	1

# Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1430	25.1	mg/Kg		_	02/21/22 22:13	5

Client Sample ID: BH01B

Date Collected: 02/15/22 12:00

Lab Sample ID: 890-1960-3

Matrix: Solid

Date Collected: 02/15/22 12:00 Date Received: 02/16/22 11:07

Sample Depth: 5

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

		(/						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/25/22 23:19	1
Toluene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/25/22 23:19	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/25/22 23:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/25/22 23:19	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/25/22 23:19	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/25/22 23:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			02/18/22 09:30	02/25/22 23:19	1
1,4-Difluorobenzene (Surr)	98		70 - 130			02/18/22 09:30	02/25/22 23:19	1

## Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/28/22 18:47	1

	Method: 8015 NM - Diesel	Range Organics (DRO	) (GC)
ı	Michiga. 00 to Min - Diese	i italige Organics (Dito	, (00)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/28/22 20:00	1

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Lab Sample ID: 890-1960-3

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

**Client Sample ID: BH01B** 

Date Collected: 02/15/22 12:00 Date Received: 02/16/22 11:07

Sample Depth: 5

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 13:04	-
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U *1	49.9	mg/Kg		02/18/22 09:15	02/21/22 13:04	•
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 13:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	105		70 - 130			02/18/22 09:15	02/21/22 13:04	
o-Terphenyl	110		70 - 130			02/18/22 09:15	02/21/22 13:04	
- Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	761		4.98	mg/Kg			02/21/22 22:19	

Lab Sample ID: 890-1960-4 Client Sample ID: BH02 Date Collected: 02/15/22 12:09 Matrix: Solid

Date Received: 02/16/22 11:07

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 23:40	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 23:40	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 23:40	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/25/22 23:40	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/25/22 23:40	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/25/22 23:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			02/18/22 09:30	02/25/22 23:40	1
1,4-Difluorobenzene (Surr)	98		70 - 130			02/18/22 09:30	02/25/22 23:40	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			02/28/22 18:47	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/28/22 20:00	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 13:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		02/18/22 09:15	02/21/22 13:25	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 13:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130			02/18/22 09:15	02/21/22 13:25	1
o-Terphenyl	109		70 - 130			02/18/22 09:15	02/21/22 13:25	1

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Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

**Client Sample ID: BH02** 

Lab Sample ID: 890-1960-4 Date Collected: 02/15/22 12:09 Matrix: Solid Date Received: 02/16/22 11:07

Sample Depth: 1

Method: 300.0 - Anions, Ion Chromatography - Soluble								
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30.5		4.96	mg/Kg			02/21/22 22:38	1

Client Sample ID: BH02A Lab Sample ID: 890-1960-5

Date Collected: 02/15/22 12:16

Date Received: 02/16/22 11:07

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:00	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:00	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:00	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/26/22 00:00	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:00	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/26/22 00:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			02/18/22 09:30	02/26/22 00:00	1
1,4-Difluorobenzene (Surr)	97		70 - 130			02/18/22 09:30	02/26/22 00:00	1
· Method: Total BTEX - Total BTE)	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			02/28/22 18:47	1
Analyte Total TPH	Result < 50.0	Qualifier U		mg/Kg	<u>D</u>	Prepared	Analyzed 02/28/22 20:00	Dil Fac
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 13:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 13:45	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 13:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130			02/18/22 09:15	02/21/22 13:45	1
o-Terphenyl	97		70 - 130			02/18/22 09:15	02/21/22 13:45	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Amalusta	Desuit	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result	Qualifier	KL			Frepareu	Allalyzeu	DII Fac

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Matrix: Solid

Lab Sample ID: 890-1960-6

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH02B

Date Collected: 02/15/22 12:21 Date Received: 02/16/22 11:07

Sample Depth: 5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:21	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:21	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:21	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/26/22 00:21	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 00:21	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/26/22 00:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			02/18/22 09:30	02/26/22 00:21	1
1,4-Difluorobenzene (Surr)	98		70 - 130			02/18/22 09:30	02/26/22 00:21	1
- Method: Total BTEX - Total BTEX	<b>Calculation</b>							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			02/28/22 18:47	1
Analyte Total TPH		Qualifier U	RL 50.0	Unit mg/Kg	D	Prepared	Analyzed 02/28/22 20:00	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/28/22 20:00	1
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	•							
Allalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	Result < 50.0		<b>RL</b> 50.0	mg/Kg	<u>D</u>	Prepared 02/18/22 09:15	Analyzed 02/21/22 14:06	Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over		U			<u>D</u>	<u>·</u>		
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U *1	50.0	mg/Kg	<u> </u>	02/18/22 09:15	02/21/22 14:06	1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.0 <50.0	U*1	50.0	mg/Kg	<u>D</u>	02/18/22 09:15	02/21/22 14:06	1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	<50.0 <50.0 <50.0	U*1	50.0 50.0 50.0	mg/Kg	<u>D</u>	02/18/22 09:15 02/18/22 09:15 02/18/22 09:15	02/21/22 14:06 02/21/22 14:06 02/21/22 14:06	1 1 1 Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.0 <50.0 <50.0 %Recovery	U*1	50.0 50.0 50.0 <i>Limits</i>	mg/Kg	<u>D</u>	02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared	02/21/22 14:06 02/21/22 14:06 02/21/22 14:06 Analyzed	1 1 1 Dil Fac
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<50.0 <50.0 <50.0 <8Recovery 104 111	U *1 U *Qualifier	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/21/22 14:06 02/21/22 14:06 02/21/22 14:06 Analyzed 02/21/22 14:06	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<50.0 <50.0 <50.0 <50.0  %Recovery 104 111  comatography -	U *1 U *Qualifier	50.0 50.0 50.0 <b>Limits</b> 70 - 130	mg/Kg	<u>D</u>	02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/21/22 14:06 02/21/22 14:06 02/21/22 14:06 Analyzed 02/21/22 14:06	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

**Client Sample ID: BH03** 

Date Collected: 02/15/22 12:29 Date Received: 02/16/22 11:07

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 00:42	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 00:42	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 00:42	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 00:42	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 00:42	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 00:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			02/18/22 09:30	02/26/22 00:42	1

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Lab Sample ID: 890-1960-7

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**Matrix: Solid** 

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH03 Lab Sample ID: 890-1960-7

Date Collected: 02/15/22 12:29

Matrix: Solid

Date Received: 02/16/22 11:07

Sample Depth: 1

Method: 8021B - Volatile Organic Compound	s (GC	(Continued)
Wichida, 002 1B - Volatile Organic Compound	3100	, (Continued)

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	97	70 - 130	02/18/22 09:30	02/26/22 00:42	1

Method:	Total	RTFX	- Total	RTFX	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/28/22 18:47	1

Mothod: 8015 NM -	Diosal Range	Organice	(DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/28/22 20:00	1

Method: 8015B	NM Discol	Dange Ore	aaniee (DD(	)) (CC)
MICHIOU. OU IOD	INIVI - DIESEI	Rallue Oli	ualiics lunc	JI (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 14:26	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		02/18/22 09:15	02/21/22 14:26	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 14:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	02/18/22 09:	15 02/21/22 14:26	1
o-Terphenyl	113		70 - 130	02/18/22 09:	15 02/21/22 14:26	1

# Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	689	5.05	mg/Kg		_	02/21/22 22:57	1

Client Sample ID: BH03A

Date Collected: 02/15/22 12:34

Lab Sample ID: 890-1960-8

Matrix: Solid

Date Collected: 02/15/22 12:34 Date Received: 02/16/22 11:07

Sample Depth: 3

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 01:02	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 01:02	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 01:02	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/26/22 01:02	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/18/22 09:30	02/26/22 01:02	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/18/22 09:30	02/26/22 01:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			02/18/22 09:30	02/26/22 01:02	1
1,4-Difluorobenzene (Surr)	96		70 - 130			02/18/22 09:30	02/26/22 01:02	1

Mothod:	Total RTEY	- Total RTFY	Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00396	U	0.00396	ma/Ka			02/28/22 18:47	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC	Method: 8015 NM -	- Diesel Range	Organics (	DRO)	(GC
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Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			02/28/22 20:00	1

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Lab Sample ID: 890-1960-8

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

Client Sample ID: BH03A

Date Collected: 02/15/22 12:34 Date Received: 02/16/22 11:07

Sample Depth: 3

Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 14:47	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 14:47	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 14:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130			02/18/22 09:15	02/21/22 14:47	1
o-Terphenyl	115		70 - 130			02/18/22 09:15	02/21/22 14:47	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	234		4.97	mg/Kg			02/21/22 23:03	1

Lab Sample ID: 890-1960-9 **Client Sample ID: BH03B** Date Collected: 02/15/22 12:39 Matrix: Solid

Date Received: 02/16/22 11:07

Sample Depth: 5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 01:23	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 01:23	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 01:23	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 01:23	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 01:23	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 01:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			02/18/22 09:30	02/26/22 01:23	1
1,4-Difluorobenzene (Surr)	97		70 - 130			02/18/22 09:30	02/26/22 01:23	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/28/22 18:47	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/28/22 20:00	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 15:08	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 15:08	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 15:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	118		70 - 130			02/18/22 09:15	02/21/22 15:08	1
o-Terphenyl	123		70 - 130			02/18/22 09:15	02/21/22 15:08	1

**Eurofins Carlsbad** 

Job ID: 890-1960-1

Client: WSP USA Inc. Project/Site: NoCaster 19 SDG: 31402309.16

**Client Sample ID: BH03B** Lab Sample ID: 890-1960-9 Date Collected: 02/15/22 12:39

Matrix: Solid

Date Received: 02/16/22 11:07 Sample Depth: 5

Method: 300.0 - Anions, Ion Chron	natography - Soluble						
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.0	4.95	mg/Kg			02/21/22 23:10	1

Client Sample ID: BH04 Lab Sample ID: 890-1960-10

Date Collected: 02/15/22 12:51 Matrix: Solid

Date Received: 02/16/22 11:07

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 01:44	
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 01:44	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 01:44	
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/18/22 09:30	02/26/22 01:44	
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 01:44	
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/18/22 09:30	02/26/22 01:44	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	104		70 - 130			02/18/22 09:30	02/26/22 01:44	
1,4-Difluorobenzene (Surr)	98		70 - 130			02/18/22 09:30	02/26/22 01:44	1
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			02/28/22 18:47	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	D:: F
							Allalyzca	DII Fac
Total TPH	<50.0	U	50.0	mg/Kg	_ <u>-</u>		02/28/22 20:00	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang					_ =			
: Method: 8015B NM - Diesel Rang	ge Organics (D					Prepared		
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics	ge Organics (D	RO) (GC) Qualifier	50.0	mg/Kg			02/28/22 20:00	1
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D Result	RO) (GC)  Qualifier	50.0	mg/Kg		Prepared	02/28/22 20:00 Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	ge Organics (D Result <50.0	RO) (GC) Qualifier U *1	50.0 RL 50.0	mg/Kg  Unit  mg/Kg		Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 15:28	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D Result <50.0	Qualifier U *1	50.0  RL  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/18/22 09:15 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 15:28 02/21/22 15:28	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	ge Organics (D Result <50.0 <50.0	Qualifier U *1	50.0  RL  50.0  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 15:28 02/21/22 15:28	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	ge Organics (D Result <50.0 <50.0 <50.0	Qualifier U *1	50.0  RL 50.0  50.0  50.0  Limits	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15 Prepared	02/28/22 20:00  Analyzed 02/21/22 15:28 02/21/22 15:28 02/21/22 15:28 Analyzed	Dil Fac
Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate	ge Organics (D Result <50.0 <50.0 <50.0 <80.0 %Recovery 122 128	Qualifier  U *1  U against U	50.0  RL 50.0  50.0  50.0  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 15:28  02/21/22 15:28  Analyzed  02/21/22 15:28	Dil Fac
Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	ge Organics (D  Result  <50.0  <50.0  <50.0  <80.0  %Recovery  122  128  comatography -	Qualifier  U *1  U against U	50.0  RL 50.0  50.0  50.0  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg		Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 15:28  02/21/22 15:28  Analyzed  02/21/22 15:28	Dil Fac

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Lab Sample ID: 890-1960-11

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH04A

Date Collected: 02/15/22 12:57 Date Received: 02/16/22 11:07

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/18/22 09:30	02/26/22 03:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:08	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/18/22 09:30	02/26/22 03:08	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		70 - 130			02/18/22 09:30	02/26/22 03:08	1
1,4-Difluorobenzene (Surr)	93		70 - 130			02/18/22 09:30	02/26/22 03:08	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/28/22 18:47	1
	e Organics (DR							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<u> </u>		Qualifier	<b>RL</b> 49.9	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/28/22 20:00	
Total TPH	Result   <49.9	Qualifier U			<u>D</u>	Prepared		
Total TPH  Method: 8015B NM - Diesel Ran	Result <49.9  ge Organics (Di	Qualifier U RO) (GC)	49.9	mg/Kg	<u> </u>		02/28/22 20:00	1
Total TPH  Method: 8015B NM - Diesel Ran Analyte	Result <49.9  ge Organics (Di	Qualifier U RO) (GC) Qualifier		mg/Kg	<u>D</u>	Prepared  02/18/22 09:15		1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics	Result <49.9  ge Organics (Dige Result	Qualifier U RO) (GC) Qualifier	49.9	mg/Kg	<u> </u>	Prepared	02/28/22 20:00  Analyzed	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <49.9  ge Organics (Dige Result	Qualifier U  RO) (GC) Qualifier U	49.9	mg/Kg	<u> </u>	Prepared	02/28/22 20:00  Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ran Analyte  Gasoline Range Organics (GRO)-C6-C10		Qualifier U  RO) (GC) Qualifier U  U *1	49.9 RL 49.9	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 16:09	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ran Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result	Qualifier U  RO) (GC) Qualifier U  U *1	49.9  RL 49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 16:09 02/21/22 16:09	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U *1	49.9  RL 49.9  49.9  49.9	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 16:09 02/21/22 16:09	Dil Face 1 1 1 Dil Face
Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result	Qualifier U  RO) (GC) Qualifier U  U *1	49.9  RL 49.9  49.9  49.9  Limits	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15 Prepared	02/28/22 20:00  Analyzed 02/21/22 16:09 02/21/22 16:09 02/21/22 16:09 Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U*1  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 16:09 02/21/22 16:09  Analyzed 02/21/22 16:09	Dil Fac
Method: 8015B NM - Diesel Ran Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	Result   <49.9	Qualifier U  RO) (GC) Qualifier U  U*1  U  Qualifier	49.9  RL 49.9  49.9  49.9  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 16:09 02/21/22 16:09  Analyzed 02/21/22 16:09	Dil Fac  1  Dil Fac  1  Dil Fac  1  Dil Fac  1  Dil Fac

Client Sample ID: BH04B

Date Collected: 02/15/22 13:01

Date Received: 02/16/22 11:07

Sample Depth: 5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 03:28	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 03:28	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 03:28	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		02/18/22 09:30	02/26/22 03:28	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 03:28	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		02/18/22 09:30	02/26/22 03:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			02/18/22 09:30	02/26/22 03:28	1

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Lab Sample ID: 890-1960-12

**Matrix: Solid** 

Lab Sample ID: 890-1960-12

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

**Client Sample ID: BH04B** 

Date Collected: 02/15/22 13:01 Date Received: 02/16/22 11:07

Sample Depth: 5

Method: 8021B - Volatile Organic Con	noounds (GC)	(Continued)
motifical collision of gains con	ipodiido (OO)	( Continuou,

Surrogate	%Recovery Qu	ualifier Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	92	70 - 130	02/18/22 09:30	02/26/22 03:28	1

Method: Tot	al BTEX - Tota	al BTEX Ca	alculation
mounou. Tot	u. D. L		aiouiutioii

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/28/22 18:47	1

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Method: 8015 NM - Diesel	Danas Organica (DDO)	/CCN
Wethod: 8015 NW - Diesei	Range Organics (DRO)	(GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/28/22 20:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 16:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 16:30	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 16:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103	70 - 130	02/18/22 09:15	02/21/22 16:30	1
o-Terphenyl	107	70 - 130	02/18/22 09:15	02/21/22 16:30	1

# Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.9	4.97	mg/Kg			02/22/22 10:13	1

Client Sample ID: BH05

Date Collected: 02/15/22 15:57

Lab Sample ID: 890-1960-13

Matrix: Solid

Date Collected: 02/15/22 15:57 Date Received: 02/16/22 11:07

Sample Depth: 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:49	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:49	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:49	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/18/22 09:30	02/26/22 03:49	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 03:49	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/18/22 09:30	02/26/22 03:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			02/18/22 09:30	02/26/22 03:49	1
1,4-Difluorobenzene (Surr)	97		70 - 130			02/18/22 09:30	02/26/22 03:49	1

## **Method: Total BTEX - Total BTEX Calculation**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	DII Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/28/22 18:47	1

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0 U	50.0	mg/Kg			02/28/22 20:00	1

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Lab Sample ID: 890-1960-13

Lab Sample ID: 890-1960-14

Matrix: Solid

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH05

Date Collected: 02/15/22 15:57 Date Received: 02/16/22 11:07

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 16:50	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 16:50	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 16:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			02/18/22 09:15	02/21/22 16:50	1
o-Terphenyl	110		70 - 130			02/18/22 09:15	02/21/22 16:50	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	531		4.96	mg/Kg			02/22/22 10:20	1

Client Sample ID: BH05A

Date Collected: 02/15/22 16:01

Date Received: 02/16/22 11:07

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 04:10	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 04:10	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 04:10	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/18/22 09:30	02/26/22 04:10	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 04:10	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/18/22 09:30	02/26/22 04:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			02/18/22 09:30	02/26/22 04:10	1
1,4-Difluorobenzene (Surr)	93		70 - 130			02/18/22 09:30	02/26/22 04:10	1
Method: Total BTEX - Total BTEX	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/28/22 18:47	1
Method: 8015 NM - Diesel Range	Organics (DR	O) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/28/22 20:00	1
Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 17:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 17:11	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 17:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130			02/18/22 09:15	02/21/22 17:11	1

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Lab Sample ID: 890-1960-14

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

Client Sample ID: BH05A

Date Collected: 02/15/22 16:01 Date Received: 02/16/22 11:07

Sample Depth: 3

Method: 300.0 - Anions, Ion Chromatography - Soluble										
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Chloride	41.1	F1	5.00	mg/Kg			02/22/22 10:26	1		

**Client Sample ID: BH05B** Lab Sample ID: 890-1960-15 Matrix: Solid

Date Collected: 02/15/22 16:04

Date Received: 02/16/22 11:07

Method: 8021B - Volatile Organic	c Compounds (	GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U	0.00201	mg/Kg		02/18/22 09:30	02/26/22 04:30	
Toluene	<0.00201	U	0.00201	mg/Kg		02/18/22 09:30	02/26/22 04:30	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/18/22 09:30	02/26/22 04:30	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/18/22 09:30	02/26/22 04:30	
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/18/22 09:30	02/26/22 04:30	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/18/22 09:30	02/26/22 04:30	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	105		70 - 130			02/18/22 09:30	02/26/22 04:30	
1,4-Difluorobenzene (Surr)	95		70 - 130			02/18/22 09:30	02/26/22 04:30	
· Method: Total BTEX - Total BTE)	Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/28/22 18:47	
Mothed: 2045 NM Discal Danse	Organica (DD)	0) (00)						
Method: 8015 NM - Diesel Range Analyte	•	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.0	U	50.0	mg/Kg			02/28/22 20:00	
: Method: 8015B NM - Diesel Rand	na Ormaniaa (D)	BO) (CC)						
Analyte	• • •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<50.0		50.0	mg/Kg		02/18/22 09:15	02/21/22 17:32	
(GRO)-C6-C10	.00.0	Ü	00.0	mg/rtg		02/10/22 00:10	02/21/22 17:02	
Diesel Range Organics (Over	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 17:32	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 17:32	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	98		70 - 130			02/18/22 09:15	02/21/22 17:32	
o-Terphenyl	99		70 - 130			02/18/22 09:15	02/21/22 17:32	
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Method: 300.0 - Amons, ion Chr								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

**Eurofins Carlsbad** 

Lab Sample ID: 890-1960-16

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH06

Date Collected: 02/15/22 15:16 Date Received: 02/16/22 11:07

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 04:51	1
Toluene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 04:51	1
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 04:51	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 04:51	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 04:51	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 04:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130			02/18/22 09:30	02/26/22 04:51	1
1,4-Difluorobenzene (Surr)	97		70 - 130			02/18/22 09:30	02/26/22 04:51	1
- Method: Total BTEX - Total BTEX	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/28/22 18:47	1
Analyte	Rosult	Qualifier	DI					
	ittosuit	Qualifici	RL	Unit	D	Prepared	Analyzed	Dil Fac
	<50.0		50.0	mg/Kg	D	Prepared	Analyzed 02/28/22 20:00	Dil Fac
Total TPH	<50.0	U			<u>D</u>	Prepared		
Total TPH  Method: 8015B NM - Diesel Rang	<50.0	U (GC)	50.0	mg/Kg	<u> </u>		02/28/22 20:00	1
Total TPH  Method: 8015B NM - Diesel Rang Analyte	<50.0  ge Organics (D	RO) (GC) Qualifier	50.0	mg/Kg	<u>D</u>	Prepared	02/28/22 20:00  Analyzed	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte	<50.0	RO) (GC) Qualifier	50.0	mg/Kg	<u> </u>		02/28/22 20:00	1 Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<50.0  ge Organics (D	RO) (GC) Qualifier U	50.0	mg/Kg	<u> </u>	Prepared	02/28/22 20:00  Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10	<50.0  ge Organics (Di  Result  <50.0	U RO) (GC) Qualifier U U*1	50.0 RL 50.0	mg/Kg  Unit  mg/Kg	<u> </u>	Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 17:52	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<50.0  ge Organics (Di Result <50.0 <50.0	U RO) (GC) Qualifier U U*1	50.0  RL  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 17:52 02/21/22 17:52	Dil Fac
Total TPH  Method: 8015B NM - Diesel Rang Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0	U RO) (GC) Qualifier U U*1	50.0  RL  50.0  50.0  50.0	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 17:52 02/21/22 17:52	Dil Face 1 1 1 Dil Face
Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 %Recovery	U RO) (GC) Qualifier U U*1	50.0  RL 50.0  50.0  50.0  Limits	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15 Prepared	02/28/22 20:00  Analyzed 02/21/22 17:52 02/21/22 17:52 02/21/22 17:52 Analyzed	Dil Fac
Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 <50.0 *Recovery 110 115	U RO) (GC) Qualifier U V*1 U Qualifier	50.0  RL 50.0  50.0  50.0  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 17:52 02/21/22 17:52  Analyzed 02/21/22 17:52	Dil Fac
Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)  Surrogate 1-Chlorooctane o-Terphenyl	<50.0 ge Organics (D) Result <50.0 <50.0 <50.0 %Recovery 110 115 omatography -	U RO) (GC) Qualifier U V*1 U Qualifier	50.0  RL 50.0  50.0  50.0  Limits 70 - 130	mg/Kg  Unit  mg/Kg  mg/Kg	<u> </u>	Prepared 02/18/22 09:15 02/18/22 09:15 02/18/22 09:15  Prepared 02/18/22 09:15	02/28/22 20:00  Analyzed 02/21/22 17:52 02/21/22 17:52  Analyzed 02/21/22 17:52	

Client Sample ID: BH06A

Date Collected: 02/15/22 15:25

Date Received: 02/16/22 11:07

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 05:11	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 05:11	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 05:11	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		02/18/22 09:30	02/26/22 05:11	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/18/22 09:30	02/26/22 05:11	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		02/18/22 09:30	02/26/22 05:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130			02/18/22 09:30	02/26/22 05:11	

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Lab Sample ID: 890-1960-17

Matrix: Solid

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

Client Sample ID: BH06A Lab Sample ID: 890-1960-17

Date Collected: 02/15/22 15:25 Matrix: Solid Date Received: 02/16/22 11:07

Sample Depth: 3

Method: 8021B - Volatile Organ	ic Compounds	(GC) (Contil	nuea)					
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	99		70 - 130			02/18/22 09:30	02/26/22 05:11	1
Method: Total BTEX - Total BTE	X Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/28/22 18:47	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<49.9	U	49.9	mg/Kg			02/28/22 20:00	1	
<del>-</del>									

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 18:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		02/18/22 09:15	02/21/22 18:12	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 18:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	98		70 - 130			02/18/22 09:15	02/21/22 18:12	

o-Terphenyl	100		70 - 130			02/18/22 09:15	02/21/22 18:12	1
Method: 300.0 - Anions, Ion Chrom	atography - S	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	833		4.96	mg/Kg			02/22/22 11:10	1

Result Qualifier

<49.9 U

Client Sample ID: BH06B Lab Sample ID: 890-1960-18 **Matrix: Solid** 

Date Collected: 02/15/22 15:30 Date Received: 02/16/22 11:07

Sample Depth: 5

Analyte

Total TPH

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:32	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:32	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:32	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/18/22 09:30	02/26/22 05:32	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:32	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/18/22 09:30	02/26/22 05:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130			02/18/22 09:30	02/26/22 05:32	1
1,4-Difluorobenzene (Surr)	95		70 - 130			02/18/22 09:30	02/26/22 05:32	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/28/22 18:47	1

**Eurofins Carlsbad** 

Analyzed

02/28/22 20:00

RL

49.9

Unit

mg/Kg

Prepared

Dil Fac

Released to Imaging: 8/1/2022 3:57:10 PM

Lab Sample ID: 890-1960-18

# **Client Sample Results**

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

Client Sample ID: BH06B

Date Collected: 02/15/22 15:30 Date Received: 02/16/22 11:07

Sample Depth: 5

Method: 8015B NM - Diesel Rang	e Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 18:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U *1	49.9	mg/Kg		02/18/22 09:15	02/21/22 18:33	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 09:15	02/21/22 18:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130			02/18/22 09:15	02/21/22 18:33	1
o-Terphenyl	106		70 - 130			02/18/22 09:15	02/21/22 18:33	1
Method: 300.0 - Anions, Ion Chro	matography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	495		5.05	mg/Kg			02/22/22 11:17	1

**Client Sample ID: BH07** Lab Sample ID: 890-1960-19 Date Collected: 02/15/22 15:36 **Matrix: Solid** 

Date Received: 02/16/22 11:07

Sample Depth: 1

Analyte

Total TPH

o-Terphenyl

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:52	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/18/22 09:30	02/26/22 05:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/26/22 05:52	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/18/22 09:30	02/26/22 05:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			02/18/22 09:30	02/26/22 05:52	1
1,4-Difluorobenzene (Surr)	97		70 - 130			02/18/22 09:30	02/26/22 05:52	1
- Method: Total BTEX - Total B1	TEX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/28/22 18:47	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 18:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		02/18/22 09:15	02/21/22 18:53	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 09:15	02/21/22 18:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130			02/18/22 09:15	02/21/22 18:53	1

RL

50.0

Unit

mg/Kg

Prepared

02/18/22 09:15

Analyzed

02/28/22 20:00

02/21/22 18:53

Dil Fac

Result Qualifier

<50.0 U

111

**Eurofins Carlsbad** 

70 - 130

Job ID: 890-1960-1

SDG: 31402309.16

**Client Sample ID: BH07** 

Client: WSP USA Inc.

Project/Site: NoCaster 19

Date Collected: 02/15/22 15:36 Date Received: 02/16/22 11:07

Sample Depth: 1

Lab Sample ID: 890-1960-19

Matrix: Solid

Method: 300.0 - Anions, Ion Chror	natography - S	oluble						
Analyte	Result C	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	392	4.	98	mg/Kg			02/22/22 11:23	1

Client Sample ID: BH07A Lab Sample ID: 890-1960-20 **Matrix: Solid** 

Date Collected: 02/15/22 15:41 Date Received: 02/16/22 11:07

Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 06:13	
Toluene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 06:13	
Ethylbenzene	< 0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 06:13	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 06:13	
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/18/22 09:30	02/26/22 06:13	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/18/22 09:30	02/26/22 06:13	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	106		70 - 130			02/18/22 09:30	02/26/22 06:13	
1,4-Difluorobenzene (Surr)	98		70 - 130			02/18/22 09:30	02/26/22 06:13	
Method: Total BTEX - Total BTEX	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte Total BTEX	Result < 0.00398		0.00398	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/28/22 18:47	
	<0.00398	U			<u>D</u>	Prepared		Dil Fa
Total BTEX	<0.00398  Organics (DR	U			<u>D</u>	Prepared Prepared		
Total BTEX  Method: 8015 NM - Diesel Range	<0.00398  Organics (DR	U O) (GC) Qualifier	0.00398	mg/Kg	_ =		02/28/22 18:47	,
Total BTEX  Method: 8015 NM - Diesel Range Analyte	<0.00398  Organics (DR Result <50.0	U O) (GC) Qualifier U	0.00398	mg/Kg	_ =		02/28/22 18:47  Analyzed	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH	<0.00398  Organics (DR Result <50.0  ge Organics (D	U O) (GC) Qualifier U	0.00398	mg/Kg	_ =		02/28/22 18:47  Analyzed	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range	<0.00398  Organics (DR Result <50.0  ge Organics (D	O) (GC) Qualifier U  RO) (GC) Qualifier	0.00398  RL  50.0	mg/Kg  Unit  mg/Kg		Prepared	02/28/22 18:47  Analyzed  02/28/22 20:00	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte Total TPH  Method: 8015B NM - Diesel Range Analyte Gasoline Range Organics	<0.00398  Organics (DR Result <50.0  ge Organics (D Result	U O) (GC) Qualifier U RO) (GC) Qualifier U	0.00398  RL  50.0	mg/Kg  Unit  mg/Kg  Unit		Prepared Prepared	02/28/22 18:47  Analyzed  02/28/22 20:00  Analyzed	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	<0.00398  Organics (DR Result <50.0  ge Organics (D Result <50.0	U O) (GC) Qualifier U RO) (GC) Qualifier U U *1	0.00398  RL  50.0	mg/Kg  Unit mg/Kg  Unit mg/Kg		Prepared  Prepared  02/18/22 09:15	02/28/22 18:47  Analyzed 02/28/22 20:00  Analyzed 02/21/22 19:13	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) OII Range Organics (Over C28-C36)	<0.00398  Organics (DR Result <50.0  ge Organics (D Result <50.0  <50.0	U O) (GC) Qualifier U RO) (GC) Qualifier U U *1	0.00398  RL  50.0  RL  50.0	mg/Kg  Unit mg/Kg  Unit mg/Kg  mg/Kg		Prepared  Prepared  02/18/22 09:15  02/18/22 09:15	02/28/22 18:47  Analyzed 02/28/22 20:00  Analyzed 02/21/22 19:13 02/21/22 19:13	Dil Fa
Total BTEX  Method: 8015 NM - Diesel Range Analyte  Total TPH  Method: 8015B NM - Diesel Range Analyte  Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	<0.00398  Organics (DR Result <50.0  ge Organics (D Result <50.0  <50.0  <50.0	U O) (GC) Qualifier U RO) (GC) Qualifier U U *1	0.00398  RL 50.0  RL 50.0  50.0	mg/Kg  Unit mg/Kg  Unit mg/Kg  mg/Kg		Prepared  Prepared  02/18/22 09:15  02/18/22 09:15	02/28/22 18:47  Analyzed 02/28/22 20:00  Analyzed 02/21/22 19:13 02/21/22 19:13	Dil Fa

**Eurofins Carlsbad** 

Analyzed 02/22/22 11:29

RL

5.05

Unit

mg/Kg

D

Prepared

Result Qualifier

56.1

Dil Fac

Analyte

Chloride

Lab Sample ID: 890-1960-21

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

**Client Sample ID: BH07B** 

Date Collected: 02/15/22 15:45 Date Received: 02/16/22 11:07

Sample Depth: 5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/24/22 09:00	02/25/22 16:19	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/24/22 09:00	02/25/22 16:19	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/24/22 09:00	02/25/22 16:19	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/24/22 09:00	02/25/22 16:19	1
o-Xylene	< 0.00199	U	0.00199	mg/Kg		02/24/22 09:00	02/25/22 16:19	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/24/22 09:00	02/25/22 16:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		70 - 130			02/24/22 09:00	02/25/22 16:19	1
1,4-Difluorobenzene (Surr)	95		70 - 130			02/24/22 09:00	02/25/22 16:19	1
Method: Total BTEX - Total BTE	( Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/25/22 20:45	1
Method: 8015 NM - Diesel Range Analyte Total TPH	•	Qualifier		Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/21/22 19:16	Dil Fac
	<50.0	U	50.0	mg/Kg			02/21/22 19.10	'
Method: 8015B NM - Diesel Rang	ge Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 *1	50.0	mg/Kg		02/18/22 14:35	02/19/22 23:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U F1 *1	50.0	mg/Kg		02/18/22 14:35	02/19/22 23:11	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 14:35	02/19/22 23:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
			70 - 130			02/18/22 14:35	02/19/22 23:11	1
1-Chlorooctane	, 0							
1-Chlorooctane o-Terphenyl	80		70 - 130			02/18/22 14:35	02/19/22 23:11	1
	80	Soluble	70 - 130			02/18/22 14:35	02/19/22 23:11	1
o-Terphenyl	80 omatography -	Soluble Qualifier	70 <sub>-</sub> 130 RL	Unit	D	02/18/22 14:35 Prepared	02/19/22 23:11  Analyzed	1 Dil Fac

**Client Sample ID: BH08** 

Date Collected: 02/15/22 16:12 Date Received: 02/16/22 11:07

Date Received. 02/10/22 11.

Sample Depth: 1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		02/24/22 09:00	02/25/22 16:39	1
Toluene	<0.00202	U	0.00202	mg/Kg		02/24/22 09:00	02/25/22 16:39	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		02/24/22 09:00	02/25/22 16:39	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		02/24/22 09:00	02/25/22 16:39	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		02/24/22 09:00	02/25/22 16:39	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		02/24/22 09:00	02/25/22 16:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130			02/24/22 09:00	02/25/22 16:39	

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**Matrix: Solid** 

Lab Sample ID: 890-1960-22

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH08 Lab Sample ID: 890-1960-22

Date Collected: 02/15/22 16:12

Date Received: 02/16/22 11:07

Matrix: Solid

Sample Depth: 1

Method: 8021B - Volatile Orga	anic Compounds (GC) (Contir	nued)			
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	93	70 - 130	02/24/22 09:00	02/25/22 16:39	1

Method: Total BTEX - Total BTEX C	alculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			02/25/22 20:45	1
Г., .,								

Method: 8015 NM - Diesel Range (	Organics (DRC	J) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/21/22 19:16	1

Method: 8015B NM - Diesel Rang	je Organics (D	RO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0	mg/Kg		02/18/22 14:35	02/20/22 00:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0	mg/Kg		02/18/22 14:35	02/20/22 00:12	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 14:35	02/20/22 00:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			·	
1-Chlorooctane	79	70 - 130	02/18/22 14:35	02/20/22 00:12	1
o-Terphenyl	77	70 - 130	02/18/22 14:35	02/20/22 00:12	1
Method: 300 0 - Anions Jon Chron	natography - Soluble	<u> </u>			

Method: 300.0 - Anions, Ion Chrom	atography - Solul	ble					
Analyte	Result Quali	lifier RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	44.0	4.95	mg/Kg			02/22/22 11:42	1

Client Sample ID: BH08A

Date Collected: 02/15/22 16:16

Lab Sample ID: 890-1960-23

Matrix: Solid

Date Received: 02/16/22 11:07

Sample Depth: 2

Analyte

Total TPH

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 17:00	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 17:00	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 17:00	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/24/22 09:00	02/25/22 17:00	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 17:00	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/24/22 09:00	02/25/22 17:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			02/24/22 09:00	02/25/22 17:00	1
1,4-Difluorobenzene (Surr)	91		70 - 130			02/24/22 09:00	02/25/22 17:00	1
Method: Total BTEX - Total BT	EX Calculation							
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/25/22 20:45	1

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Dil Fac

Analyzed

02/21/22 19:16

RL

49.9

Unit

mg/Kg

Prepared

Result Qualifier

<49.9 U

Matrix: Solid

Lab Sample ID: 890-1960-23

# **Client Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Client Sample ID: BH08A

Date Collected: 02/15/22 16:16 Date Received: 02/16/22 11:07

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.9	U *1	49.9	mg/Kg		02/18/22 14:35	02/20/22 00:33	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.9	U *1	49.9	mg/Kg		02/18/22 14:35	02/20/22 00:33	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		02/18/22 14:35	02/20/22 00:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130			02/18/22 14:35	02/20/22 00:33	1
o-Terphenyl	94		70 - 130			02/18/22 14:35	02/20/22 00:33	1
Method: 300.0 - Anions, Ion Chro	omatography -	Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

# **Surrogate Summary**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		BFB1	DFBZ1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-11356-A-1-E MS	Matrix Spike	92	111	
880-11356-A-1-F MSD	Matrix Spike Duplicate	93	106	
890-1960-1	BH01	100	98	
890-1960-1 MS	BH01	102	100	
890-1960-1 MSD	BH01	102	100	
890-1960-2	BH01A	108	95	
890-1960-3	BH01B	102	98	
890-1960-4	BH02	104	98	
890-1960-5	BH02A	103	97	
890-1960-6	BH02B	104	98	
890-1960-7	BH03	103	97	
890-1960-8	BH03A	101	96	
890-1960-9	BH03B	103	97	
890-1960-10	BH04	104	98	
890-1960-11	BH04A	106	93	
890-1960-12	BH04B	107	92	
890-1960-13	BH05	103	97	
890-1960-14	BH05A	114	93	
890-1960-15	BH05B	105	95	
890-1960-16	BH06	102	97	
890-1960-17	ВН06А	103	99	
890-1960-18	ВН06В	113	95	
890-1960-19	BH07	101	97	
890-1960-20	ВН07А	106	98	
890-1960-21	BH07B	112	95	
890-1960-22	BH08	115	93	
890-1960-23	BH08A	109	91	
LCS 880-19724/1-A	Lab Control Sample	103	101	
LCS 880-19725/1-A	Lab Control Sample	86	107	
LCSD 880-19724/2-A	Lab Control Sample Dup	101	90	
LCSD 880-19725/2-A	Lab Control Sample Dup	85	110	
MB 880-19724/5-A	Method Blank	99	96	
MB 880-19725/5-A	Method Blank	109	102	
MB 880-20196/5-A	Method Blank	95	95	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid Prep Type: Total/NA

_			
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-1960-1	BH01	109	113
890-1960-1 MS	BH01	104	96
890-1960-1 MSD	BH01	100	92
890-1960-2	BH01A	103	106
890-1960-3	BH01B	105	110

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# **Surrogate Summary**

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

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

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

		400:	OTDII:	Percent Surrogate Recovery (Acceptance Lim
	011 40 415	1CO1	OTPH1	
o-1960-4	Client Sample ID BH02	<u>(70-130)</u>	( <b>70-130</b> )	
0-1960-5	BH02A	94	97	
0-1960-6	BH02B	104	111	
0-1960-7	BH03	110	113	
0-1960-8	BH03A	111	115	
0-1960-9	BH03B	118	123	
0-1960-10	BH04	122	128	
0-1960-11	BH04A	109	114	
0-1960-12	BH04B	103	107	
0-1960-13	BH05	105	110	
0-1960-14	BH05A	101	104	
0-1960-15	BH05B	98	99	
0-1960-16	BH06	110	115	
0-1960-17	BH06A	98	100	
0-1960-18	ВН06В	105	106	
0-1960-19	BH07	106	111	
0-1960-20	BH07A	107	109	
0-1960-21	внотв	78	80	
0-1960-21 MS	внотв	79	83	
0-1960-21 MSD	ВН07В	90	96	
0-1960-22	BH08	79	77	
0-1960-23	BH08A	95	94	
CS 880-19794/2-A	Lab Control Sample	103	109	
CSD 880-19794/3-A	Lab Control Sample Dup	102	111	
B 880-19794/1-A	Method Blank	105	113	
Surrogate Legend				

OTPH = o-Terphenyl

OTPH = o-Terphenyl

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

Matrix: Solid Prep Type: Total/NA

				Percent Surrogate Recovery (Acceptance Limits)
		1CO2	OTPH2	
ab Sample ID	Client Sample ID	(70-130)	(70-130)	
LCS 880-19826/2-A	Lab Control Sample	126	134 S1+	
LCSD 880-19826/3-A	Lab Control Sample Dup	94	103	
MB 880-19826/1-A	Method Blank	96	100	
Surrogate Legend				
1CO = 1-Chlorooctane				

Client: WSP USA Inc. Job ID: 890-1960-1 SDG: 31402309.16 Project/Site: NoCaster 19

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-19724/5-A

**Matrix: Solid** 

Analysis Batch: 20289

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 19724

ı		MB	MR						
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Benzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:16	1
	Toluene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:16	1
	Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:16	1
I	m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/18/22 09:30	02/25/22 22:16	1
	o-Xylene	<0.00200	U	0.00200	mg/Kg		02/18/22 09:30	02/25/22 22:16	1
	Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/18/22 09:30	02/25/22 22:16	1

MB MB

MD MD

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		70 - 130	02/18/22 09:30	02/25/22 22:16	1
1,4-Difluorobenzene (Surr)	96		70 - 130	02/18/22 09:30	02/25/22 22:16	1

Lab Sample ID: LCS 880-19724/1-A

Matrix: Solid

Analysis Batch: 20289

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 19724

	<b>Spike</b>	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1109		mg/Kg		111	70 - 130	
Toluene	0.100	0.1068		mg/Kg		107	70 - 130	
Ethylbenzene	0.100	0.1049		mg/Kg		105	70 - 130	
m-Xylene & p-Xylene	0.200	0.2171		mg/Kg		109	70 - 130	
o-Xylene	0.100	0.1069		mg/Kg		107	70 - 130	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
4-Bromofluorobenzene (Surr)	103	70 - 130
1,4-Difluorobenzene (Surr)	101	70 - 130

Lab Sample ID: LCSD 880-19724/2-A

**Matrix: Solid** 

Analysis Batch: 20289

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

Prep Type: Total/NA

Prep Batch: 19724

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	0.100	0.1024		mg/Kg		102	70 - 130	8	35	
Toluene	0.100	0.1011		mg/Kg		101	70 - 130	6	35	
Ethylbenzene	0.100	0.09904		mg/Kg		99	70 - 130	6	35	
m-Xylene & p-Xylene	0.200	0.2050		mg/Kg		103	70 - 130	6	35	
o-Xylene	0.100	0.1005		mg/Kg		101	70 - 130	6	35	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1.4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: 890-1960-1 MS

Matrix: Solid

Analysis Batch: 20289

**Client Sample ID: BH01** Prep Type: Total/NA

Prep Batch: 19724

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00198	U	0.100	0.08339		mg/Kg		83	70 - 130	
Toluene	<0.00198	U	0.100	0.07764		mg/Kg		77	70 - 130	

## **QC Sample Results**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

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

Lab Sample ID: 890-1960-1 MS

**Matrix: Solid** 

Analysis Batch: 20289

Client Sample ID: BH01
Prep Type: Total/NA

Prep Batch: 19724

	Sample	Sample	<b>Spike</b>	MS	MS				%Rec.
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Ethylbenzene	<0.00198	U	0.100	0.07096		mg/Kg		71	70 - 130
m-Xylene & p-Xylene	<0.00397	U F1	0.201	0.1153	F1	mg/Kg		57	70 - 130
o-Xylene	<0.00198	U	0.100	0.07878		mg/Kg		78	70 - 130

MS MS

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Client Sample ID: BH01

Prep Type: Total/NA

Prep Batch: 19724

Lab Sample ID: 890-1960-1 MSD Matrix: Solid

Analysis Batch: 20289

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00198	U	0.100	0.08074		mg/Kg		81	70 - 130	3	35
Toluene	<0.00198	U	0.100	0.07557		mg/Kg		75	70 - 130	3	35
Ethylbenzene	<0.00198	U	0.100	0.07013		mg/Kg		70	70 - 130	1	35
m-Xylene & p-Xylene	<0.00397	U F1	0.200	0.1195	F1	mg/Kg		60	70 - 130	4	35
o-Xylene	<0.00198	U	0.100	0.07891		mg/Kg		79	70 - 130	0	35

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: MB 880-19725/5-A

Matrix: Solid

Analysis Batch: 20287

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Prep Batch: 19725

MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 10:25	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 10:25	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 10:25	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/24/22 09:00	02/25/22 10:25	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/24/22 09:00	02/25/22 10:25	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/24/22 09:00	02/25/22 10:25	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	02/24/22 09:00	02/25/22 10:25	1
1,4-Difluorobenzene (Surr)	102		70 - 130	02/24/22 09:00	02/25/22 10:25	1

Lab Sample ID: LCS 880-19725/1-A

Matrix: Solid

Analysis Batch: 20287

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 19725

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1084		mg/Kg		108	70 - 130	
Toluene	0.100	0.08952		mg/Kg		90	70 - 130	
Ethylbenzene	0.100	0.08898		mg/Kg		89	70 - 130	
m-Xylene & p-Xylene	0.200	0.1813		mg/Kg		91	70 - 130	

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## **QC Sample Results**

Client: WSP USA Inc. Job ID: 890-1960-1 SDG: 31402309.16 Project/Site: NoCaster 19

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

Lab Sample ID: LCS 880-19725/1-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 20287** Prep Batch: 19725

		<b>Бріке</b>	LCS	LCS				%Rec.	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
o-Xylene		0.100	0.08954		mg/Kg		90	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	86		70 - 130
1,4-Difluorobenzene (Surr)	107		70 - 130

Lab Sample ID: LCSD 880-19725/2-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 20287** 

Analysis Batch: 20287							Prep	Batch:	19725
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1085		mg/Kg		108	70 - 130		35
Toluene	0.100	0.08803		mg/Kg		88	70 - 130	2	35
Ethylbenzene	0.100	0.08742		mg/Kg		87	70 - 130	2	35
m-Xylene & p-Xylene	0.200	0.1788		mg/Kg		89	70 - 130	1	35
o-Xylene	0.100	0.08779		mg/Kg		88	70 - 130	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

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Lab Sample ID: 880-11356-A-1-E MS Client Sample ID: Matrix Spike **Matrix: Solid** 

Prep Type: Total/NA **Analysis Batch: 20287** Prep Batch: 19725

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U	0.0990	0.1104		mg/Kg		112	70 - 130	
Toluene	<0.00199	U	0.0990	0.09183		mg/Kg		92	70 - 130	
Ethylbenzene	0.00258		0.0990	0.09203		mg/Kg		90	70 - 130	
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1885		mg/Kg		93	70 - 130	
o-Xylene	0.00237		0.0990	0.09318		mg/Kg		92	70 - 130	

m-Xylene & p-Xylene	<0.00398	U	0.198	0.1885	mg/Kg	93	70 - 130	
o-Xylene	0.00237		0.0990	0.09318	mg/Kg	92	70 - 130	
	MS	MS						
Surrogate	%Recovery	Qualifier	Limits					
4-Bromofluorobenzene (Surr)	92		70 - 130					

70 - 130

Lab Sample ID: 880-11356-A-1-F MSD Client Sample ID: Matrix Spike Duplicate Prep Type: Total/NA

**Matrix: Solid** Analysis Batch: 20287

1,4-Difluorobenzene (Surr)

Analysis Batch: 20287									Prep	Batch:	19725
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00199	U	0.0992	0.1074		mg/Kg		108	70 - 130	3	35
Toluene	<0.00199	U	0.0992	0.09362		mg/Kg		93	70 - 130	2	35
Ethylbenzene	0.00258		0.0992	0.09517		mg/Kg		93	70 - 130	3	35
m-Xylene & p-Xylene	<0.00398	U	0.198	0.1978		mg/Kg		98	70 - 130	5	35
o-Xylene	0.00237		0.0992	0.09806		mg/Kg		96	70 - 130	5	35

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

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

Lab Sample ID: 880-11356-A-1-F MSD

**Matrix: Solid** 

**Analysis Batch: 20287** 

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 19725

MSD MSD

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 93 70 - 130 1,4-Difluorobenzene (Surr) 106 70 - 130

Lab Sample ID: MB 880-20196/5-A Client Sample ID: Method Blank

**Matrix: Solid** 

**Analysis Batch: 20289** 

Prep Type: Total/NA

Prep Batch: 20196

Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac <0.00200 U 0.00200 02/24/22 10:19 02/25/22 11:22 Benzene mg/Kg Toluene <0.00200 U 0.00200 mg/Kg 02/24/22 10:19 02/25/22 11:22 <0.00200 U 0.00200 02/24/22 10:19 02/25/22 11:22 Ethylbenzene mg/Kg m-Xylene & p-Xylene <0.00400 U 0.00400 mg/Kg 02/24/22 10:19 02/25/22 11:22 o-Xylene <0.00200 U 0.00200 mg/Kg 02/24/22 10:19 02/25/22 11:22 Xylenes, Total <0.00400 U 0.00400 mg/Kg 02/24/22 10:19 02/25/22 11:22

MB MB

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		70 - 130	02/24/22 10:19	02/25/22 11:22	1
1,4-Difluorobenzene (Surr)	95		70 - 130	02/24/22 10:19	02/25/22 11:22	1

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

Lab Sample ID: MB 880-19794/1-A

Matrix: Solid

Analysis Batch: 19891

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 19794

Dil Fac
-0 1
0 1
0 1
d ):4 ):4 ):4

MB MB

MB MB

Surrogate	%Recovery Qualific	er Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105	70 - 130	02/18/22 09:15	02/21/22 10:40	1
o-Terphenyl	113	70 - 130	02/18/22 09:15	02/21/22 10:40	1

Lab Sample ID: LCS 880-19794/2-A

**Matrix: Solid** 

Analysis Batch: 19891

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 19794

l		Spike	LCS	LCS				%Rec.	
	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
	Gasoline Range Organics	1000	818.6		mg/Kg		82	70 - 130	
	(GRO)-C6-C10								
	Diesel Range Organics (Over	1000	1004		mg/Kg		100	70 - 130	
ı	C10 C28)								

C10-C28)

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	109		70 - 130

C10-C28)

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19

SDG: 31402309.16

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

Lab Sample ID: LCSD 880-19794/3-A Matrix: Solid				Clier	nt Sam	ple ID: I	Lab Contro Prep 1	I Sampl ype: To	•
Analysis Batch: 19891							Prep	Batch:	19794
	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics	1000	997.8		mg/Kg		100	70 - 130	20	20
(GRO)-C6-C10									
Diesel Range Organics (Over	1000	1271	*1	mg/Kg		127	70 - 130	23	20

LCSD LCSD %Recovery Qualifier Limits Surrogate 70 - 130 1-Chlorooctane 102 o-Terphenyl 111 70 - 130

Lab Sample ID: 890-1960-1 MS **Client Sample ID: BH01 Matrix: Solid** Prep Type: Total/NA

**Analysis Batch: 19891** Prep Batch: 19794

Sample Sample Spike MS MS %Rec. Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits <50.0 U F1 1000 180 70 - 130 Gasoline Range Organics 1833 F1 mg/Kg (GRO)-C6-C10 Diesel Range Organics (Over 113 \*1 F1 1000 1456 F1 mg/Kg 134 70 - 130 C10-C28)

MS MS Qualifier Limits Surrogate %Recovery 1-Chlorooctane 104 70 - 130 o-Terphenyl 96 70 - 130

Lab Sample ID: 890-1960-1 MSD Client Sample ID: BH01 **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 19891 Prep Batch: 19794

Sample Sample Spike MSD MSD %Rec. **RPD** RPD Limit Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits Gasoline Range Organics <50.0 U F1 998 1562 F1 154 20 70 - 130 16 mg/Kg (GRO)-C6-C10 113 \*1 F1 998 1407 130 70 - 130 3 20 Diesel Range Organics (Over mg/Kg C10-C28)

MSD MSD Surrogate %Recovery Qualifier Limits 1-Chlorooctane 100 70 - 130 92 70 - 130 o-Terphenyl

Lab Sample ID: MB 880-19826/1-A Client Sample ID: Method Blank

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 19863** Prep Batch: 19826 MB MB

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		02/18/22 14:35	02/19/22 22:04	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		02/18/22 14:35	02/19/22 22:04	1
C10-C28)								
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/18/22 14:35	02/19/22 22:04	1

Client: WSP USA Inc. Job ID: 890-1960-1 SDG: 31402309.16 Project/Site: NoCaster 19

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

Lab Sample ID: MB 880-19826/1-A

**Matrix: Solid** 

**Analysis Batch: 19863** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Prep Batch: 19826

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepa	ared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	02/18/22	2 14:35	02/19/22 22:04	1
o-Terphenyl	100		70 - 130	02/18/22	2 14:35	02/19/22 22:04	1

Lab Sample ID: LCS 880-19826/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

Analysis Batch: 19863

Prep Type: Total/NA

Prep Batch: 19826

	Spike	LCS	LCS				%Rec.
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Gasoline Range Organics	1000	1174		mg/Kg		117	70 - 130
(GRO)-C6-C10							
Diesel Range Organics (Over	1000	1072		mg/Kg		107	70 - 130
C10-C28)							

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	126		70 - 130
o-Terphenyl	134	S1+	70 - 130

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Matrix: Solid Analysis Batch: 19863** 

Lab Sample ID: LCSD 880-19826/3-A

Prep Batch: 19826

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics	1000	904.3	*1	mg/Kg		90	70 - 130	26	20	
(GRO)-C6-C10										
Diesel Range Organics (Over	1000	821.9	*1	mg/Kg		82	70 - 130	26	20	

C10-C28)

LCSD LCSD

I	Surrogate	%Recovery	Qualifier	Limits
	1-Chlorooctane	94		70 - 130
I	o-Terphenyl	103		70 - 130

Lab Sample ID: 890-1960-21 MS Client Sample ID: BH07B

**Matrix: Solid** 

Analysis Batch: 19863

Prep Type: Total/NA Prep Batch: 19826

	Sample	Sample	Spike	MS	MS				%Rec.		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics	<50.0	U F1 *1	1000	1127		mg/Kg		110	70 - 130		
(GRO)-C6-C10											
Diesel Range Organics (Over	<50.0	U F1 *1	1000	1300		mg/Kg		130	70 - 130		
C10-C28)											

C10-C28)

MS MS

Surrogate	%Recovery Qualifier	Limits
1-Chlorooctane	79	70 - 130
o-Terphenyl	83	70 - 130

Client: WSP USA Inc. Project/Site: NoCaster 19 SDG: 31402309.16

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

Lab Sample ID: 890-1960-21 MSD Client Sample ID: BH07B

**Matrix: Solid** 

Analysis Batch: 19863

Prep Type: Total/NA

Prep Batch: 19826

_	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 *1	998	1341	F1	mg/Kg		132	70 - 130	17	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1 *1	998	1497	F1	mg/Kg		150	70 - 130	14	20

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	96		70 - 130

#### Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19804/1-A Client Sample ID: Method Blank **Prep Type: Soluble** 

Matrix: Solid

Analysis Batch: 19937

мв мв

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00	mg/Kg			02/21/22 19:59	1

Lab Sample ID: LCS 880-19804/2-A **Client Sample ID: Lab Control Sample Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 19937** 

	Spike	LCS	LCS				%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	250	246.7		mg/Kg		99	90 - 110	

Lab Sample ID: LCSD 880-19804/3-A **Client Sample ID: Lab Control Sample Dup Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 19937

	Spike	LCSD	LCSD				%Rec.		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chloride	250	254.4		ma/Ka		102	90 110		20	

Lab Sample ID: 890-1960-1 MS Client Sample ID: BH01 **Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 19937

	Sample	Sample	<b>Бріке</b>	IVIO	IVIS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	960		1250	2122		mg/Kg		93	90 - 110	

Lab Sample ID: 890-1960-1 MSD **Client Sample ID: BH01 Prep Type: Soluble** 

**Matrix: Solid** 

Analysis Batch: 19937

	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	960		1250	2278		mg/Kg	_	105	90 - 110	7	20

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

**Prep Type: Soluble** 

**Prep Type: Soluble** 

**Prep Type: Soluble** 

Client Sample ID: BH05A

Client Sample ID: BH05A

**Prep Type: Soluble** 

**Prep Type: Soluble** 

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-19805/1-A

Matrix: Solid

**Analysis Batch: 19939** 

MB MB

 Analyte
 Result
 Qualifier
 RL
 Unit
 D
 Prepared
 Analyzed
 Dil Fac

 Chloride
 <5.00</td>
 U
 5.00
 mg/Kg
 02/22/22 08:38
 1

Lab Sample ID: LCS 880-19805/2-A

Matrix: Solid

**Analysis Batch: 19939** 

Spike LCS LCS %Rec. Added Analyte Result Qualifier Unit D %Rec Limits Chloride 250 255.3 mg/Kg 102 90 - 110

Lab Sample ID: LCSD 880-19805/3-A

Matrix: Solid

**Analysis Batch: 19939** 

LCSD LCSD %Rec. RPD Spike Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chloride 250 261.8 105 mg/Kg 90 - 110

Lab Sample ID: 890-1960-14 MS

Matrix: Solid

**Analysis Batch: 19939** 

Spike MS MS Sample Sample %Rec. Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits 246.0 F1 Chloride 41.1 F1 250 82 90 - 110 mg/Kg

Lab Sample ID: 890-1960-14 MSD

**Matrix: Solid** 

Analysis Batch: 19939

Sample Sample Spike MSD MSD %Rec. RPD Analyte Result Qualifier Added Result Qualifier Unit %Rec Limits RPD Limit Chloride 41.1 F1 250 297.0 mg/Kg 102 90 - 110 19 20

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 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

#### **GC VOA**

#### Prep Batch: 19724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batc
890-1960-1	BH01	Total/NA	Solid	5035	
890-1960-2	BH01A	Total/NA	Solid	5035	
890-1960-3	BH01B	Total/NA	Solid	5035	
890-1960-4	BH02	Total/NA	Solid	5035	
890-1960-5	BH02A	Total/NA	Solid	5035	
890-1960-6	BH02B	Total/NA	Solid	5035	
890-1960-7	BH03	Total/NA	Solid	5035	
890-1960-8	BH03A	Total/NA	Solid	5035	
890-1960-9	внозв	Total/NA	Solid	5035	
890-1960-10	BH04	Total/NA	Solid	5035	
890-1960-11	BH04A	Total/NA	Solid	5035	
890-1960-12	BH04B	Total/NA	Solid	5035	
890-1960-13	BH05	Total/NA	Solid	5035	
890-1960-14	BH05A	Total/NA	Solid	5035	
890-1960-15	BH05B	Total/NA	Solid	5035	
890-1960-16	BH06	Total/NA	Solid	5035	
890-1960-17	BH06A	Total/NA	Solid	5035	
890-1960-18	BH06B	Total/NA	Solid	5035	
890-1960-19	BH07	Total/NA	Solid	5035	
890-1960-20	BH07A	Total/NA	Solid	5035	
MB 880-19724/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19724/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19724/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1960-1 MS	BH01	Total/NA	Solid	5035	
890-1960-1 MSD	BH01	Total/NA	Solid	5035	

#### Prep Batch: 19725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-21	ВН07В	Total/NA	Solid	5035	<u> </u>
890-1960-22	BH08	Total/NA	Solid	5035	
890-1960-23	BH08A	Total/NA	Solid	5035	
MB 880-19725/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19725/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19725/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11356-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-11356-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

#### Prep Batch: 20196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-20196/5-A	Method Blank	Total/NA	Solid	5035	

#### Analysis Batch: 20287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-21	ВН07В	Total/NA	Solid	8021B	19725
890-1960-22	BH08	Total/NA	Solid	8021B	19725
890-1960-23	BH08A	Total/NA	Solid	8021B	19725
MB 880-19725/5-A	Method Blank	Total/NA	Solid	8021B	19725
LCS 880-19725/1-A	Lab Control Sample	Total/NA	Solid	8021B	19725
LCSD 880-19725/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19725
880-11356-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	19725
880-11356-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19725

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 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

#### **GC VOA**

#### **Analysis Batch: 20289**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-1	BH01	Total/NA	Solid	8021B	19724
890-1960-2	BH01A	Total/NA	Solid	8021B	19724
890-1960-3	BH01B	Total/NA	Solid	8021B	19724
890-1960-4	BH02	Total/NA	Solid	8021B	19724
890-1960-5	BH02A	Total/NA	Solid	8021B	19724
890-1960-6	BH02B	Total/NA	Solid	8021B	19724
890-1960-7	BH03	Total/NA	Solid	8021B	19724
890-1960-8	BH03A	Total/NA	Solid	8021B	19724
890-1960-9	ВН03В	Total/NA	Solid	8021B	19724
890-1960-10	BH04	Total/NA	Solid	8021B	19724
890-1960-11	BH04A	Total/NA	Solid	8021B	19724
890-1960-12	BH04B	Total/NA	Solid	8021B	19724
890-1960-13	BH05	Total/NA	Solid	8021B	19724
890-1960-14	BH05A	Total/NA	Solid	8021B	19724
890-1960-15	BH05B	Total/NA	Solid	8021B	19724
890-1960-16	BH06	Total/NA	Solid	8021B	19724
890-1960-17	BH06A	Total/NA	Solid	8021B	19724
890-1960-18	вно6в	Total/NA	Solid	8021B	19724
890-1960-19	BH07	Total/NA	Solid	8021B	19724
890-1960-20	BH07A	Total/NA	Solid	8021B	19724
MB 880-19724/5-A	Method Blank	Total/NA	Solid	8021B	19724
MB 880-20196/5-A	Method Blank	Total/NA	Solid	8021B	20196
LCS 880-19724/1-A	Lab Control Sample	Total/NA	Solid	8021B	19724
LCSD 880-19724/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19724
890-1960-1 MS	BH01	Total/NA	Solid	8021B	19724
890-1960-1 MSD	BH01	Total/NA	Solid	8021B	19724

#### Analysis Batch: 20370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-21	внотв	Total/NA	Solid	Total BTEX	
890-1960-22	BH08	Total/NA	Solid	Total BTEX	
890-1960-23	BH08A	Total/NA	Solid	Total BTEX	

#### Analysis Batch: 20556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-1960-1	BH01	Total/NA	Solid	Total BTEX	
890-1960-2	BH01A	Total/NA	Solid	Total BTEX	
390-1960-3	BH01B	Total/NA	Solid	Total BTEX	
390-1960-4	BH02	Total/NA	Solid	Total BTEX	
390-1960-5	BH02A	Total/NA	Solid	Total BTEX	
390-1960-6	BH02B	Total/NA	Solid	Total BTEX	
390-1960-7	BH03	Total/NA	Solid	Total BTEX	
390-1960-8	BH03A	Total/NA	Solid	Total BTEX	
390-1960-9	BH03B	Total/NA	Solid	Total BTEX	
390-1960-10	BH04	Total/NA	Solid	Total BTEX	
390-1960-11	BH04A	Total/NA	Solid	Total BTEX	
390-1960-12	BH04B	Total/NA	Solid	Total BTEX	
390-1960-13	BH05	Total/NA	Solid	Total BTEX	
390-1960-14	BH05A	Total/NA	Solid	Total BTEX	
390-1960-15	BH05B	Total/NA	Solid	Total BTEX	
890-1960-16	BH06	Total/NA	Solid	Total BTEX	

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Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

# **GC VOA (Continued)**

#### Analysis Batch: 20556 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-17	BH06A	Total/NA	Solid	Total BTEX	
890-1960-18	ВН06В	Total/NA	Solid	Total BTEX	
890-1960-19	BH07	Total/NA	Solid	Total BTEX	
890-1960-20	ВН07А	Total/NA	Solid	Total BTEX	

#### **GC Semi VOA**

#### Prep Batch: 19794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-1	BH01	Total/NA	Solid	8015NM Prep	
890-1960-2	BH01A	Total/NA	Solid	8015NM Prep	
890-1960-3	BH01B	Total/NA	Solid	8015NM Prep	
890-1960-4	BH02	Total/NA	Solid	8015NM Prep	
890-1960-5	BH02A	Total/NA	Solid	8015NM Prep	
890-1960-6	BH02B	Total/NA	Solid	8015NM Prep	
890-1960-7	BH03	Total/NA	Solid	8015NM Prep	
890-1960-8	BH03A	Total/NA	Solid	8015NM Prep	
890-1960-9	ВН03В	Total/NA	Solid	8015NM Prep	
890-1960-10	BH04	Total/NA	Solid	8015NM Prep	
890-1960-11	BH04A	Total/NA	Solid	8015NM Prep	
890-1960-12	BH04B	Total/NA	Solid	8015NM Prep	
890-1960-13	BH05	Total/NA	Solid	8015NM Prep	
890-1960-14	BH05A	Total/NA	Solid	8015NM Prep	
890-1960-15	BH05B	Total/NA	Solid	8015NM Prep	
890-1960-16	BH06	Total/NA	Solid	8015NM Prep	
890-1960-17	BH06A	Total/NA	Solid	8015NM Prep	
890-1960-18	ВН06В	Total/NA	Solid	8015NM Prep	
890-1960-19	BH07	Total/NA	Solid	8015NM Prep	
890-1960-20	BH07A	Total/NA	Solid	8015NM Prep	
MB 880-19794/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19794/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19794/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1960-1 MS	BH01	Total/NA	Solid	8015NM Prep	
890-1960-1 MSD	BH01	Total/NA	Solid	8015NM Prep	

#### Prep Batch: 19826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-21	BH07B	Total/NA	Solid	8015NM Prep	
890-1960-22	BH08	Total/NA	Solid	8015NM Prep	
890-1960-23	BH08A	Total/NA	Solid	8015NM Prep	
MB 880-19826/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19826/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19826/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1960-21 MS	ВН07В	Total/NA	Solid	8015NM Prep	
890-1960-21 MSD	BH07B	Total/NA	Solid	8015NM Prep	

#### **Analysis Batch: 19863**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-21	ВН07В	Total/NA	Solid	8015B NM	19826
890-1960-22	BH08	Total/NA	Solid	8015B NM	19826
890-1960-23	BH08A	Total/NA	Solid	8015B NM	19826

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

# GC Semi VOA (Continued)

#### **Analysis Batch: 19863 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19826/1-A	Method Blank	Total/NA	Solid	8015B NM	19826
LCS 880-19826/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19826
LCSD 880-19826/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19826
890-1960-21 MS	ВН07В	Total/NA	Solid	8015B NM	19826
890-1960-21 MSD	ВН07В	Total/NA	Solid	8015B NM	19826

#### **Analysis Batch: 19891**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-1	BH01	Total/NA	Solid	8015B NM	19794
890-1960-2	BH01A	Total/NA	Solid	8015B NM	19794
890-1960-3	BH01B	Total/NA	Solid	8015B NM	19794
890-1960-4	BH02	Total/NA	Solid	8015B NM	19794
890-1960-5	BH02A	Total/NA	Solid	8015B NM	19794
890-1960-6	BH02B	Total/NA	Solid	8015B NM	19794
890-1960-7	BH03	Total/NA	Solid	8015B NM	19794
890-1960-8	BH03A	Total/NA	Solid	8015B NM	19794
890-1960-9	ВН03В	Total/NA	Solid	8015B NM	19794
890-1960-10	BH04	Total/NA	Solid	8015B NM	19794
890-1960-11	BH04A	Total/NA	Solid	8015B NM	19794
890-1960-12	BH04B	Total/NA	Solid	8015B NM	19794
890-1960-13	BH05	Total/NA	Solid	8015B NM	19794
890-1960-14	BH05A	Total/NA	Solid	8015B NM	19794
890-1960-15	BH05B	Total/NA	Solid	8015B NM	19794
890-1960-16	BH06	Total/NA	Solid	8015B NM	19794
890-1960-17	BH06A	Total/NA	Solid	8015B NM	19794
890-1960-18	BH06B	Total/NA	Solid	8015B NM	19794
890-1960-19	BH07	Total/NA	Solid	8015B NM	19794
890-1960-20	BH07A	Total/NA	Solid	8015B NM	19794
MB 880-19794/1-A	Method Blank	Total/NA	Solid	8015B NM	19794
LCS 880-19794/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19794
LCSD 880-19794/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19794
890-1960-1 MS	BH01	Total/NA	Solid	8015B NM	19794
890-1960-1 MSD	BH01	Total/NA	Solid	8015B NM	19794

#### Analysis Batch: 19992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-21	BH07B	Total/NA	Solid	8015 NM	
890-1960-22	BH08	Total/NA	Solid	8015 NM	
890-1960-23	BH08A	Total/NA	Solid	8015 NM	

#### Analysis Batch: 20572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-1	BH01	Total/NA	Solid	8015 NM	
890-1960-2	BH01A	Total/NA	Solid	8015 NM	
890-1960-3	BH01B	Total/NA	Solid	8015 NM	
890-1960-4	BH02	Total/NA	Solid	8015 NM	
890-1960-5	BH02A	Total/NA	Solid	8015 NM	
890-1960-6	BH02B	Total/NA	Solid	8015 NM	
890-1960-7	BH03	Total/NA	Solid	8015 NM	
890-1960-8	BH03A	Total/NA	Solid	8015 NM	
890-1960-9	BH03B	Total/NA	Solid	8015 NM	

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Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

# GC Semi VOA (Continued)

#### **Analysis Batch: 20572 (Continued)**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-10	BH04	Total/NA	Solid	8015 NM	
890-1960-11	BH04A	Total/NA	Solid	8015 NM	
890-1960-12	BH04B	Total/NA	Solid	8015 NM	
890-1960-13	BH05	Total/NA	Solid	8015 NM	
890-1960-14	BH05A	Total/NA	Solid	8015 NM	
890-1960-15	BH05B	Total/NA	Solid	8015 NM	
890-1960-16	BH06	Total/NA	Solid	8015 NM	
890-1960-17	BH06A	Total/NA	Solid	8015 NM	
890-1960-18	BH06B	Total/NA	Solid	8015 NM	
890-1960-19	BH07	Total/NA	Solid	8015 NM	
890-1960-20	BH07A	Total/NA	Solid	8015 NM	

#### **HPLC/IC**

#### Leach Batch: 19804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-1	BH01	Soluble	Solid	DI Leach	
890-1960-2	BH01A	Soluble	Solid	DI Leach	
890-1960-3	BH01B	Soluble	Solid	DI Leach	
890-1960-4	BH02	Soluble	Solid	DI Leach	
890-1960-5	BH02A	Soluble	Solid	DI Leach	
890-1960-6	BH02B	Soluble	Solid	DI Leach	
890-1960-7	BH03	Soluble	Solid	DI Leach	
890-1960-8	ВН03А	Soluble	Solid	DI Leach	
890-1960-9	ВН03В	Soluble	Solid	DI Leach	
890-1960-10	BH04	Soluble	Solid	DI Leach	
MB 880-19804/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19804/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19804/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1960-1 MS	BH01	Soluble	Solid	DI Leach	
890-1960-1 MSD	BH01	Soluble	Solid	DI Leach	

#### Leach Batch: 19805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-1960-11	BH04A	Soluble	Solid	DI Leach	
890-1960-12	BH04B	Soluble	Solid	DI Leach	
890-1960-13	BH05	Soluble	Solid	DI Leach	
890-1960-14	BH05A	Soluble	Solid	DI Leach	
890-1960-15	BH05B	Soluble	Solid	DI Leach	
890-1960-16	BH06	Soluble	Solid	DI Leach	
890-1960-17	BH06A	Soluble	Solid	DI Leach	
390-1960-18	ВН06В	Soluble	Solid	DI Leach	
890-1960-19	BH07	Soluble	Solid	DI Leach	
890-1960-20	ВН07А	Soluble	Solid	DI Leach	
390-1960-21	BH07B	Soluble	Solid	DI Leach	
890-1960-22	BH08	Soluble	Solid	DI Leach	
890-1960-23	BH08A	Soluble	Solid	DI Leach	
MB 880-19805/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19805/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19805/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-1960-14 MS	BH05A	Soluble	Solid	DI Leach	

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

# **HPLC/IC** (Continued)

#### Leach Batch: 19805 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-14 MSD	BH05A	Soluble	Solid	DI Leach	

#### Analysis Batch: 19937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-1	BH01	Soluble	Solid	300.0	19804
890-1960-2	BH01A	Soluble	Solid	300.0	19804
890-1960-3	BH01B	Soluble	Solid	300.0	19804
890-1960-4	BH02	Soluble	Solid	300.0	19804
890-1960-5	BH02A	Soluble	Solid	300.0	19804
890-1960-6	BH02B	Soluble	Solid	300.0	19804
890-1960-7	BH03	Soluble	Solid	300.0	19804
890-1960-8	ВН03А	Soluble	Solid	300.0	19804
890-1960-9	ВН03В	Soluble	Solid	300.0	19804
890-1960-10	BH04	Soluble	Solid	300.0	19804
MB 880-19804/1-A	Method Blank	Soluble	Solid	300.0	19804
LCS 880-19804/2-A	Lab Control Sample	Soluble	Solid	300.0	19804
LCSD 880-19804/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19804
890-1960-1 MS	BH01	Soluble	Solid	300.0	19804
890-1960-1 MSD	BH01	Soluble	Solid	300.0	19804

#### **Analysis Batch: 19939**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-1960-11	BH04A	Soluble	Solid	300.0	19805
890-1960-12	BH04B	Soluble	Solid	300.0	19805
890-1960-13	BH05	Soluble	Solid	300.0	19805
890-1960-14	BH05A	Soluble	Solid	300.0	19805
890-1960-15	BH05B	Soluble	Solid	300.0	19805
890-1960-16	BH06	Soluble	Solid	300.0	19805
890-1960-17	BH06A	Soluble	Solid	300.0	19805
890-1960-18	BH06B	Soluble	Solid	300.0	19805
890-1960-19	BH07	Soluble	Solid	300.0	19805
890-1960-20	BH07A	Soluble	Solid	300.0	19805
890-1960-21	ВН07В	Soluble	Solid	300.0	19805
890-1960-22	BH08	Soluble	Solid	300.0	19805
890-1960-23	BH08A	Soluble	Solid	300.0	19805
MB 880-19805/1-A	Method Blank	Soluble	Solid	300.0	19805
LCS 880-19805/2-A	Lab Control Sample	Soluble	Solid	300.0	19805
LCSD 880-19805/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19805
890-1960-14 MS	BH05A	Soluble	Solid	300.0	19805
890-1960-14 MSD	BH05A	Soluble	Solid	300.0	19805

Date Received: 02/16/22 11:07

Soluble

Job ID: 890-1960-1

Client: WSP USA Inc. Project/Site: NoCaster 19 SDG: 31402309.16

Client Sample ID: BH01 Lab Sample ID: 890-1960-1 Date Collected: 02/15/22 11:42

**Matrix: Solid** 

XEN MID

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 5.04 g 5 mL 19724 02/18/22 09:30 KL XEN MID Total/NA Analysis 8021B 1 5 mL 5 mL 20289 02/25/22 22:38 KL XEN MID Total/NA Analysis Total BTEX 20556 02/28/22 18:47 ΑJ XEN MID Total/NA Analysis 8015 NM 1 20572 02/28/22 20:00 AJ XEN MID 10 mL 19794 02/18/22 09:15 XEN MID Total/NA 8015NM Prep 10.01 g DM Prep Total/NA Analysis 8015B NM 19891 02/21/22 11:42 ΑJ XEN MID 50 mL 19804 02/18/22 10:28 XEN MID Soluble Leach DI Leach 5 g СН

Client Sample ID: BH01A Lab Sample ID: 890-1960-2

19937

02/21/22 21:54

СН

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Date Collected: 02/15/22 11:54 Matrix: Solid Date Received: 02/16/22 11:07

Dil Initial Final Batch Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 5.00 g 5 mL 19724 02/18/22 09:30 KL XEN MID 02/25/22 22:59 8021B Total/NA Analysis 1 5 mL 5 mL 20289 KL XEN MID Total/NA Total BTEX 20556 Analysis 02/28/22 18:47 XEN MID 1 A.I Total/NA Analysis 8015 NM 20572 02/28/22 20:00 XEN MID Total/NA 8015NM Prep 10.01 g 19794 02/18/22 09:15 DM XEN MID Prep 10 mL Total/NA Analysis 8015B NM 19891 02/21/22 12:44 AJ XEN MID Soluble DI Leach 4.98 g 50 mL 19804 02/18/22 10:28 CH **XEN MID** Leach Soluble Analysis 300.0 5 19937 02/21/22 22:13 CH XEN MID

Client Sample ID: BH01B Lab Sample ID: 890-1960-3 Date Collected: 02/15/22 12:00

Date Received: 02/16/22 11:07

Analysis

300.0

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/25/22 23:19	KL	XEN MIC
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 13:04	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19804	02/18/22 10:28	CH	XEN MID
Soluble	Analysis	300.0		1			19937	02/21/22 22:19	CH	XEN MID

Lab Sample ID: 890-1960-4 Client Sample ID: BH02 Date Collected: 02/15/22 12:09 **Matrix: Solid** 

Date Received: 02/16/22 11:07

	5	5		<b>5</b> "		<b>-</b>	5.4.			
	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/25/22 23:40	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID

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**Matrix: Solid** 

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

**Client Sample ID: BH02** Lab Sample ID: 890-1960-4

Matrix: Solid

Date Collected: 02/15/22 12:09 Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 13:25	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	19804	02/18/22 10:28	CH	XEN MID
Soluble	Analysis	300.0		1			19937	02/21/22 22:38	CH	XEN MID

Client Sample ID: BH02A Lab Sample ID: 890-1960-5

Date Collected: 02/15/22 12:16 **Matrix: Solid** Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 00:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 13:45	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	19804	02/18/22 10:28	CH	XEN MID
Soluble	Analysis	300.0		1			19937	02/21/22 22:44	CH	XEN MID

Client Sample ID: BH02B Lab Sample ID: 890-1960-6

Date Collected: 02/15/22 12:21 **Matrix: Solid** Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 00:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 14:06	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19804	02/18/22 10:28	CH	XEN MID
Soluble	Analysis	300.0		1			19937	02/21/22 22:51	CH	XEN MID

**Client Sample ID: BH03** Lab Sample ID: 890-1960-7

Date Collected: 02/15/22 12:29 **Matrix: Solid** Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 00:42	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 14:26	AJ	XEN MID

SDG: 31402309.16

**Client Sample ID: BH03** 

Client: WSP USA Inc.

Project/Site: NoCaster 19

Date Collected: 02/15/22 12:29 Date Received: 02/16/22 11:07

Lab Sample ID: 890-1960-7

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.95 g	50 mL	19804	02/18/22 10:28	СН	XEN MID
Soluble	Analysis	300.0		1			19937	02/21/22 22:57	СН	XEN MID

Client Sample ID: BH03A Lab Sample ID: 890-1960-8

Date Collected: 02/15/22 12:34 Matrix: Solid Date Received: 02/16/22 11:07

Batch Batch Dil Initial Final Batch Prepared **Prep Type** Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA 5035 5.05 g 19724 02/18/22 09:30 KL XEN MID Prep 5 mL Total/NA 8021B 5 mL 5 mL 02/26/22 01:02 KL XEN MID Analysis 1 20289 Total/NA Total BTEX 20556 02/28/22 18:47 XEN MID Analysis AJ 1 Total/NA Analysis 8015 NM 20572 02/28/22 20:00 AJ XEN MID 19794 XEN MID Total/NA Prep 8015NM Prep 10.01 g 10 mL 02/18/22 09:15 DM 8015B NM Total/NA Analysis 19891 02/21/22 14:47 AJ XEN MID 50 mL Soluble DI Leach 5.03 g 19804 02/18/22 10:28 СН XEN MID Leach 300.0 19937 02/21/22 23:03 CH XEN MID Soluble Analysis 1

Client Sample ID: BH03B Lab Sample ID: 890-1960-9

Date Collected: 02/15/22 12:39 **Matrix: Solid** Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 01:23	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 15:08	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19804	02/18/22 10:28	CH	XEN MID
Soluble	Analysis	300.0		1			19937	02/21/22 23:10	CH	XEN MID

**Client Sample ID: BH04** Lab Sample ID: 890-1960-10

Date Collected: 02/15/22 12:51 Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 01:44	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 15:28	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19804	02/18/22 10:28	CH	XEN MID
Soluble	Analysis	300.0		1			19937	02/21/22 23:16	CH	XEN MID

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**Matrix: Solid** 

Client: WSP USA Inc. Project/Site: NoCaster 19 SDG: 31402309.16

Client Sample ID: BH04A

Date Collected: 02/15/22 12:57 Date Received: 02/16/22 11:07

Lab Sample ID: 890-1960-11

Matrix: Solid

Matrix: Solid

	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	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 03:08	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 16:09	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 10:07	CH	XEN MID

Client Sample ID: BH04B Lab Sample ID: 890-1960-12 Date Collected: 02/15/22 13:01

Date Received: 02/16/22 11:07

_	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 03:28	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 16:30	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 10:13	CH	XEN MID

**Client Sample ID: BH05** Lab Sample ID: 890-1960-13 Date Collected: 02/15/22 15:57 **Matrix: Solid** 

Date Received: 02/16/22 11:07

	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	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 03:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 16:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 10:20	CH	XEN MID

Client Sample ID: BH05A Lab Sample ID: 890-1960-14

Date Collected: 02/15/22 16:01 Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 04:10	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID

**Eurofins Carlsbad** 

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**Matrix: Solid** 

SDG: 31402309.16

Client Sample ID: BH05A

Client: WSP USA Inc.

Project/Site: NoCaster 19

Date Collected: 02/15/22 16:01 Date Received: 02/16/22 11:07

Lab Sample ID: 890-1960-14

**Matrix: Solid** 

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 17:11	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19805	02/18/22 10:30	СН	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 10:26	CH	XEN MID

Client Sample ID: BH05B Lab Sample ID: 890-1960-15 Date Collected: 02/15/22 16:04 **Matrix: Solid** 

Date Received: 02/16/22 11:07

Batch Batch Dil Initial Final Batch Prepared Prep Type Method Amount Amount Number or Analyzed Type Run Factor Analyst Lab 5035 Total/NA Prep 4.97 g 5 mL 19724 02/18/22 09:30 KL XEN MID Total/NA Analysis 8021B 5 mL 5 mL 20289 02/26/22 04:30 KL XEN MID 1 Total/NA Total BTEX 20556 XEN MID Analysis 1 02/28/22 18:47 AJ Total/NA Analysis 8015 NM 20572 02/28/22 20:00 XEN MID ΑJ 1 XEN MID Total/NA Prep 8015NM Prep 10.01 g 10 mL 19794 02/18/22 09:15 DM Total/NA Analysis 8015B NM 19891 02/21/22 17:32 XEN MID 1 AJSoluble Leach DI Leach 4.98 g 50 mL 19805 02/18/22 10:30 CH XEN MID Soluble Analysis 300.0 1 19939 02/22/22 10:45 CH XEN MID

**Client Sample ID: BH06** Lab Sample ID: 890-1960-16 Date Collected: 02/15/22 15:16 **Matrix: Solid** 

Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 04:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 17:52	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		5			19939	02/22/22 10:51	CH	XEN MID

Client Sample ID: BH06A Lab Sample ID: 890-1960-17

Date Collected: 02/15/22 15:25 Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 05:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	10.03 g	10 mL	19794 19891	02/18/22 09:15 02/21/22 18:12	DM AJ	XEN MID XEN MID

**Eurofins Carlsbad** 

**Matrix: Solid** 

Released to Imaging: 8/1/2022 3:57:10 PM

Job ID: 890-1960-1 SDG: 31402309.16

Client Sample ID: BH06A

Date Received: 02/16/22 11:07

Client: WSP USA Inc.

Project/Site: NoCaster 19

Lab Sample ID: 890-1960-17 Date Collected: 02/15/22 15:25

Matrix: Solid

Batch Batch Dil Initial Final Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Soluble DI Leach 19805 Leach 5.04 g 50 mL 02/18/22 10:30 СН XEN MID 300.0 02/22/22 11:10 Soluble Analysis 1 19939 CH XEN MID

Client Sample ID: BH06B Lab Sample ID: 890-1960-18

Date Collected: 02/15/22 15:30 **Matrix: Solid** 

Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 05:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 18:33	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 11:17	CH	XEN MID

**Client Sample ID: BH07** Lab Sample ID: 890-1960-19

Date Collected: 02/15/22 15:36 **Matrix: Solid** Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 05:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 18:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 11:23	CH	XEN MID

Client Sample ID: BH07A Lab Sample ID: 890-1960-20

Date Collected: 02/15/22 15:41 **Matrix: Solid** Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19724	02/18/22 09:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20289	02/26/22 06:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20556	02/28/22 18:47	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20572	02/28/22 20:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19794	02/18/22 09:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19891	02/21/22 19:13	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 11:29	CH	XEN MID

Client: WSP USA Inc. Job ID: 890-1960-1 Project/Site: NoCaster 19 SDG: 31402309.16

**Client Sample ID: BH07B** 

Lab Sample ID: 890-1960-21 Date Collected: 02/15/22 15:45

Matrix: Solid

Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19725	02/24/22 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20287	02/25/22 16:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20370	02/25/22 20:45	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19992	02/21/22 19:16	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19826	02/18/22 14:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19863	02/19/22 23:11	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 11:36	CH	XEN MID

**Client Sample ID: BH08** Lab Sample ID: 890-1960-22

Date Collected: 02/15/22 16:12 Matrix: Solid

Date Received: 02/16/22 11:07

	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	19725	02/24/22 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20287	02/25/22 16:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20370	02/25/22 20:45	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19992	02/21/22 19:16	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19826	02/18/22 14:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19863	02/20/22 00:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 11:42	CH	XEN MID

Client Sample ID: BH08A Lab Sample ID: 890-1960-23 Date Collected: 02/15/22 16:16 **Matrix: Solid** 

Date Received: 02/16/22 11:07

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19725	02/24/22 09:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20287	02/25/22 17:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20370	02/25/22 20:45	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19992	02/21/22 19:16	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19826	02/18/22 14:35	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19863	02/20/22 00:33	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19805	02/18/22 10:30	CH	XEN MID
Soluble	Analysis	300.0		1			19939	02/22/22 11:48	CH	XEN MID

Laboratory References:

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

# **Accreditation/Certification Summary**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

#### **Laboratory: Eurofins 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	T104704400-21-22	06-30-22
The following analytes the agency does not of		ut the laboratory is not certifi	ied by the governing authority. This list ma	ay include analytes for wh
Analysis Method	Prep Method	Matrix	Analyte	
0045 1114		Solid	Total TPH	
8015 NM		Juliu	IOIAI IPH	

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# **Method Summary**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

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

#### **Protocol References:**

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions. SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

#### Laboratory References:

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

**Eurofins Carlsbad** 

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# **Sample Summary**

 Client: WSP USA Inc.
 Job ID: 890-1960-1

 Project/Site: NoCaster 19
 SDG: 31402309.16

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-1960-1	BH01	Solid	02/15/22 11:42	02/16/22 11:07	1
890-1960-2	BH01A	Solid	02/15/22 11:54	02/16/22 11:07	3
890-1960-3	BH01B	Solid	02/15/22 12:00	02/16/22 11:07	5
890-1960-4	BH02	Solid	02/15/22 12:09	02/16/22 11:07	1
890-1960-5	BH02A	Solid	02/15/22 12:16	02/16/22 11:07	3
890-1960-6	BH02B	Solid	02/15/22 12:21	02/16/22 11:07	5
890-1960-7	BH03	Solid	02/15/22 12:29	02/16/22 11:07	1
890-1960-8	вноза	Solid	02/15/22 12:34	02/16/22 11:07	3
890-1960-9	BH03B	Solid	02/15/22 12:39	02/16/22 11:07	5
890-1960-10	BH04	Solid	02/15/22 12:51	02/16/22 11:07	1
890-1960-11	BH04A	Solid	02/15/22 12:57	02/16/22 11:07	3
890-1960-12	BH04B	Solid	02/15/22 13:01	02/16/22 11:07	5
890-1960-13	BH05	Solid	02/15/22 15:57	02/16/22 11:07	1
890-1960-14	BH05A	Solid	02/15/22 16:01	02/16/22 11:07	3
890-1960-15	BH05B	Solid	02/15/22 16:04	02/16/22 11:07	5
890-1960-16	BH06	Solid	02/15/22 15:16	02/16/22 11:07	1
890-1960-17	BH06A	Solid	02/15/22 15:25	02/16/22 11:07	3
890-1960-18	ВН06В	Solid	02/15/22 15:30	02/16/22 11:07	5
890-1960-19	BH07	Solid	02/15/22 15:36	02/16/22 11:07	1
890-1960-20	BH07A	Solid	02/15/22 15:41	02/16/22 11:07	3
890-1960-21	ВН07В	Solid	02/15/22 15:45	02/16/22 11:07	5
890-1960-22	BH08	Solid	02/15/22 16:12	02/16/22 11:07	1
890-1960-23	BH08A	Solid	02/15/22 16:16	02/16/22 11:07	2

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City, State ZIP:

Midland, Texas 79705

City, State ZIP:

Midland, Texas 79705

Reporting:Level II Level III

□ST/UST

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□vel IV

Program: UST/PST State of Project:

□RP □Brownfields □RC **Work Order Comments** 

Juperfund

3300 North A Street Building 1, unit 222

3300 North A Street Building 1, unit 222

Company Name: Project Manager:

WSP USA

Kalei Jennings

Address:

Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Bill to: (if different)

Company Name:

WSP USA Kalei Jennings Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296

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

Work Order No:

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Date/Time	Received by: (Signature)	Relinquished by: (Signature)	ne	Date/Time		ıre)	Received by: (Signature)	Received		y: (Signature)	Relinquished by: (Signature)
	assigns standard terms and conditions due to circumstances beyond the control productions previously negotiated.	otice: 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 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. 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.	enco, its affiliate incurred by to but not analyze	npany to X r expenses to Xenco, I	client con losses or ubmitted t	rchase order from sponsibility for any for each sample s	titutes a valid pur t assume any res nd a charge of \$5	of samples considers and shall no beach project an	elinquishment one cost of samp	document and re liable only for th large of \$75.00 w	otice: Signature of this service. Xenco will be Xenco. A minimum c
1631 / 245.1 / 7470 / 7471 : Hg		Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	Ba Be Cd	Sb As I	CRA S	TCLP / SPLP 6010: 8RCRA	TCLP / SP	nalyzed	al(s) to be a	Circle Method(s) and Metal(s) to be analyzed	Circle Metho
Sn U V Zn	i K Se Ag SiO2	ю́'	Ba Be B	Sb As B		8RCRA 13PPM Texas 11 Al	3RCRA 13P		200.8 / 6020:		Total 200.7 / 6010
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DISCRETE			×	×	_	ω	2 11:54	02/15/22	S	1A	внота
DISCRETE			×	×		1	2 11:42	02/15/22	S	01	ВН01
Sample Comments	Sa		Chlori	TPH (I	Numi	Depth	Time	Date Sampled	Matrix	ntification	Sample Identification
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						tine	Routine	09.16	31402909.16		roject Number:
Work Order Notes	W	ANALYSIS REQUEST				Turn Around	T <sub>1</sub>		9	NoCaster 19	roject Name:
Ciner:	Deliverables: EDD	Deliverat		o.com	IS@WSI	Email: Kalei.jennings@wsp.com	Email		03	817-683-2503	hone:
245.2	]					,					

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# Chain of Custody

,	Citation Caccoary
-4200 I	-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-33
-5440)	-5440) FI Paso TX (915)585-3443 Lubbock TX (806)794-129

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 circum stances beyond the control of t 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 pereviously negotiated. 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 stancter derms and conditions Phone: P.O. Number: Sample Custody Seals: Cooler Custody Seals: Received Intact: Sampler's Name: Project Manager: Project Number Project Name: City, State ZIP: Company Name: SAMPLE RECEIPT emperature (°C): Relinquished by: (Signature) Total 200.7 / 6010 Circle Method(s) and Metal(s) to be analyzed Sample Identification вно6В **BH06A** ВН05В BH04A **BH05A** BH04B BH07A BH06 BH05 XENCO Kalei Jennings Payton Benner 817-683-2503 WSP USA NoCaster 19 Midland, Texas 79705 3300 North A Street Building 1, unit 222 200.8 / 6020: Yes Yes Yes Temp Blank: No Z 0 31402909.16 0000000 SSS Matrix Š ₹ A A 1000 Received by: (Signature) Sampled Yes 02/15/22 02/15/22 02/15/22 02/15/22 02/15/22 02/15/22 02/15/22 02/15/22 02/15/22 Date 02/15/22 S Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-62-0-2000) Total Containers: 8RCRA 13PPM Texas 11 Al TCLP / SPLP 6010: 8RCRA ermometer ID Sampled 15:41 15:30 12:57 15:36 15:25 15:16 16:04 16:01 13:01 15:57 Time Wet Ice: Houston, TX (281) 240 Midland,TX (432-704-5440) EL Paso,TX (915)585 Routine Rush: Email: Kalei.jennings@wsp.com Due Date: Turn Around Bill to: (if different) City, State ZIP: Company Name: Yes Depth ω S S ω ω S ω 8 **Number of Containers** 12.01 Sb As Ba Sb As Ba WSP USA Kalei Jennings Midland, Texas 79705 3300 North A Street Building 1, unit 222 Date/Time TPH (EPA 8015) × BTEX (EPA 0=8021) E011 Ве Ве Chloride (EPA 300.0) × × × Cd Cr Co Cu Pb Mn Mo Ni See Ag TI U B Cd Ca Cr Co Cu Fe Pb Mc Mn Mo Ni K Se Relinquished by: (Signature) ANALYSIS REQUEST Reporting:Level || Level || Deliverables: EDD Program: UST/PST PRP Brownfields RC State of Project: Received by: (Signature) Work Order Comments Αg SiO2 Na Sr Tl Sn U V □ST/UST ADaPT  $\square$ 1631 / 245.1 / 7470 / 7471 : Hg TAT starts the day recevied by the lab, if received by 4:30pm □ RP Sample Comments Work Order Notes Other: DISCRETE Buperfund □vel IV Date/Time Zn 으 

Work Order No:

Revised Date 051418 Rev 2018.1

**Eurofins Carlsbad** 

ewrofins Environment Testing America

1089 N Canal St.	_	Chain of Custody Record		odv R		3												6	💸 eurofins	Environment Testing
Cansbad, NM 88220 Phone. 575-988-3199 Fax: 575-988-3199			1							=		763	2 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2							America
Client Information (Sub Contract Lab)	Sampler			Lab PM Krame	Lab PM Kramer, Jessica	sica		- 1	- 1			Carrier Tracking No(s):	r Trac	king N	o(s):		l	<u></u>	COC No 890-628 1	
	Phone <sup>.</sup>			E-Mail jessic	E-Mail essica.kramer@eurofinset.com	er@e	urofir	set.c	≗			State	State of Origin New Mexico	8 🖹		Ì		77 70	Page: Page 1 of 3	
Company: Eurofins Environment Testing South Centr					Accreditations Required (See note) NELAP - Louisiana, NELAP	ations F	Require	d (See a, NE	AP note):	Texas	8				- 1	- 1		<u></u>	Job #: 890-1960-1	
1211 W Florida Ave, ,	Due Date Requested 2/22/2022	<u>a</u>							Anal	ysis	Requested	ues	ted						n Code	
City: Midland	TAT Requested (days):	ys):						$\dashv$	$\dashv$	7					_	_	57889708884	4		M Hexane N - None
State Ztr: TX, 79701																	Salah majar salah		Zn Acetate Nitric Acid - NaHSO4	O AsNaO2 P Na2O4S Q Na2SO3
Phone: 432-704-5440(Tel)	PO #				)		e 							<del>-</del>			di van en		MeOH - Amchlor	S - H2SO4
Email	WO#:						hlorid										WW - 1504000	0.0000000000000000000000000000000000000	H ASCOMIC ACID III	U - Acetone  W MCAA
Project Name <sup>.</sup> NoCaster 19	Project #: 89000048				on the contract of												CONTROL VIOLA	Southern		W pH 4-5 Z other (specify)
Site:	SSOW#:				100000000000000000000000000000000000000														Other:	
Sample Montification - Client ID (1.55 ID)		Sample			eld Filtered : erform MS/M	15MOD_NM/8	00_ORGFM_28	021B/5035FP_0 	16MOD_Calc						<del></del>			otal Number		
	$\bigvee$	LA	Preservation Code:		**************************************		7,44		2.45							e Carella		<u> </u>	opoolui iiida	about mononial work
BH01 (890-1960-1)	2/15/22	11 42 Mountain		Solid		×	×	×	×									-		
BH01A (890-1960-2)	2/15/22	11 54 Mountain		Solid		×	×	×	×							_				
вно1в (890-1960-3)	2/15/22	12 00 Mountain		Solid		×	×	×	×	1							-0.00 40.00	_		
ВН02 (890-1960-4)	2/15/22	12 09 Mountain		Solid		×	×	×	×								Province of the Control of the Contr	-		
BH02A (890-1960-5)	2/15/22	12 16 Mountain		Solid		×	×	×	×									4		
ВН02В (890-1960-6)	2/15/22	12 21 Mountain		Solid		×	×	×	×									-		
BH03 (890-1960-7)	2/15/22	12 29 Mountain		Solid		×	×	×	×									4		
BH03A (890-1960-8)	2/15/22	12 34 Mountain		Solid		×	×	×	×											
ВНОЗВ (890-1960-9)	2/15/22	12 39 Mountain		Solid		×	×	×	×								3007-3-32-3	-		
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.	Testing South Centra ve for analysis/tests/r ral LLC attention imr	If LLC places the natrix being an nediately If all	ne ownership of alyzed, the san requested acc	f method analy nples must be sereditations are	te & acc shipped I	reditati back to o date	on con the Eu	ipliance rofins I	e upon Enviror ned Ch	out su ment	bcontr Festing Custo	act lat Soutl	orator Cent	ies T ral LL osaid	his sa C labo comp	mple orator licano	shipm or of e to E	ent is her in	forwarded under chair structions will be provi- s Environment Testing	n-of-custody If the ded Any changes to
Possible Hazard Identification Unconfirmed					San	Sample Disposal ( A fee	Spo	sal (	A fee	may_	∐be a	sses	sed	fsa	nple	_ ar	∐g∐	ine	may be assessed if samples are retained longer than 1 month)	ionth)
Deliverable Requested I, II III, IV Other (specify)	Primary Deliverable Rank	ble Rank 2			Spe	Special Instructions/QC F	al Instructions/QC	tions/		equirements	emer	ents	a c	7 01			1	1011	ACTING CO.	MORIUS
Empty Kit Relinquished by		Date			Time:	ı	$\geq$	۱ *		١	ı		Metho	Method of Shipment:	hipme	Ä	Į	ı		
Relinquished by Well Cays Q We 38	Date/Time:		0 0	Company		Received	8 2 2 3	Z	A	3	2	2	1/ 7		Date/Time			H	bee	Company
Relinquished by	Date/Time		0	Company		Received by:	by.								Date/Time	ii .		1.		
Custody Seals Intact. Custody Seal No						Cooler	Tempe	rature		a Q	er Re	marks		L						
						Cooler	Cooler Temperature(s) °C	erature		and Other Remarks.	er Re	marks								

Ver 06/08/2021

# **Chain of Custody Record**

Chain of Custody	Record		💸 eurofins   Environment Testing
Chair of Custody	Zecolo		America
Sampler La	ab PM	Carrier Tracking No(s):	COC No
7	ramer Jessica		890-628 2
Phone:	-Mail	State of Origin	Page:
je	essica kramer@eurofinset.com	New Mexico	Page 2 of 3
	Accreditations Required (See note):		Job#
	NELAP - Louisiana NELAP - Texas		890-1960-1
Due Date Requested			Preservation Codes
2/22/2022	Analysis Re		
TAT Requested (days):			A - HCL M Hexane
	ain of Custody	Lab PM   Kramer Jessica	Analysis Requested  Lab PM  Lab PM  Kramer Jessica  E-Mail  jessica kramer@eurofinset.com  Accreditations Required (See note):  NELAP - Louisiana NELAP - Texas  Analysis Requested

	Sampler			11 ~  D	1	l	l	I	l	١	١		١	1		l	l	-	l							
Client Information (Sub Contract Lab)	Company			Krame	Kramer Jessica	ssica						Carr	Camer Fracking No(s)	Xing 2	lo(s)			<b>8</b> C	890-62	890-628 2						
	Phone:			E-Mail iessic	E-Mail lessica kramer@eurofinset.com	mer@		fineet	3			State	State of Origin	ğ gi				<del></del>	Page:	Page:	<b>~</b>	1				丄
Company Eurofins Environment Testing South Centr					Accreditations Required (See note)	tations	Requ	red (S)	e note	,	Texas	Ī						<del>اج ،</del>	30b #	Job #:	·				l	$\bot$
Address 1211 W Florida Ave, ,	Due Date Requested 2/22/2022	и							Anal	7 I	R	Requested	ted	1	ı			╗	rese	Preservation Codes	00	g 8				
City Midland	TAT Requested (days):	/s):													_	_		0 ₪ >	A-HCL B NaOH	오픈	•	) Z Z	Hexane	5 6		
State, Zip. TX, 79701																		<u> </u>	E- Nº ₹ 2	C - Zn Acetate D Nitric Acid E - NaHSO4	J. 6	O T Q	P Na2O4S Q Na2SO3	ಜಹಜ		
Phone: 432-704-5440(TeI)	PO #				)	TPH	e										<del></del>	ப	MeOH 3 - Amchic	F MeOH G - Amchlor		s or zo	Na2S2C H2SO4	. ~ iğ		
Email	WO#				Constanting and	p Full 1	Chlorid									·	a marin	Monthly Mar	J Fice As	H Ascorbic Acid I-lice J DI Water	Acid	< ⊂ ⊣	TSP Dodecahydrate Acetone - MCAA	odeca le	hydrat	τρ
Project Name: NoCaster 19	Project #: 89000048				PATRICULAR STATE	S_Pre	ACH	ΞX										amen	C EDTA	ΑŢΑ		ΝĘ	pH 4-5 other (specify)	5 specify	ت	
Site:	SSOW#:				GS(900) DO	5NM_	DI_LE	c BTI									(8520)	history.	Other:							
					RANGER WEEK	/8015	28D/D	_Calc		С							8.000M									<u> </u>
		Sample	Sample Type	Matrix (W=water S=solid,	d Filtered form MS/I	MOD_NM	ORGFM_2	B/6036FP	I_BTEX_G	MOD_Calc								il Number								
Compression - Cigit ID (Cap ID)	Sample Date	X I	Preservation Code:	14 T	VISF 4 TOSS	80	30	80		180		-			ilai	4	1	Y	j	Spec	Jal I	nstr	Special Instructions/Note	S/No	16	Ĵ
BH04 (890-1960-10)	2/15/22	12 51 Mountain		Solid	72	×	×	×	×	×	38400	all transfer out	Xui n Ay				7 8000	- /					and the second			
BH04A (890-1960-11)	2/15/22	12 57 Mountain		Solid		×	×	×	×	×	$\dashv$	7				_	X20 20 V	-4								
BH04B (890-1960-12)	2/15/22	13 01 Mountain		Solid		×	×	×	×	×	-					_										
BH05 (890-1960-13)	2/15/22	15 57 Mountain		Solid	_	×	×	×	×	×						_	****	*								
BH05A (890-1960-14)	2/15/22	16 01 Mountain		Solid	_	×	×	×	×	×	_						2270	44								$\bot$
ВН05В (890-1960-15)	2/15/22	16 04 Mountain		Solid		×	×	×	×	×	$\dashv$					_	2,2170									
BH06 (890-1960-16)	2/15/22	15 16 Mountain		Solid		×	×	×	×	×								4								
BH06A (890-1960-17)	2/15/22	15 25 Mountain		Solid		×	×	×	×	×	-	$\neg \dagger$			_		*7****					l				
BH06B (890-1960-18)	2/15/22	15 30 Mountain		Solid		×	×	×	×	×								4								
Note Since laboratory accreditations are subject to change Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.	resting South Central re for analysis/tests/nral LLC attention imn	l, LLC places th natrix being an nediately If all	ie ownership o alyzed the san requested acc	f method, analinples must be areditations are	te & ac shipped current	creditz back to date	ation co	ompliar Eurofin	nce upo s Envir	onmer Chain	subcon it Testii of Cust	tract la	borato th Cen	ries. T tral LL to said	his sa C labo comp	mple s vratory licano	shipm or of	ent is her in	forwa struct	arded u	ill be p	chain- provid- sting	of-custc ad Any South C	ydy If chang	the ses to	
Possible Hazard Identification Unconfirmed					ွန္	∐mp/e	Dist	osal	Sample Disposal ( A fee	e ma	may be assessed if samples are retained longer	asse	ssed	if sai	nple	⊓are	□ reta	inec	lon	ger t	than	1 mc	month)			$\bot$
Deliverable Requested I II III IV Other (specify)	Primary Deliverable Rank 2	ole Rank 2			Sp	ecial	Instru	al Instructions/QC	Special Instructions/QC Requirements	Requ	ireme	ents	Š	7 1.01	ľ		2	2	201100101				WOINTS	٥		
Empty Kit Relinquished by		Date			Time.	ı		7	1	ı	1	1	Meth	Method of Shipment:	hipme	큐	ı		١	١						L
(Joe C & 2) W. J 20	Date/Time.			Company		Received	ved	4	1	1	1	$\geq$	2	$\square$	Date/Time:	ime:		ı	- 1			<u></u>	Company			
	Date/Time		0	Company		Receive	ved by		1	h	F	C			Date/Time:	ime:	- 1				1	2	Company			$\perp$
Relinquished by	Date/Time			Company		Rece	Received by			Ì					Date/Time	ime	- 1				1	Ω	Company			
Custody Seals Intact: Custody Seal No						Cool	er Tem	peratu	Cooler Temperature(s) °C		and Other Remarks:	emark	۶۶								- 1	F				
						•																				•

Ver 06/08/2021

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

**Eurofins Carlsbad** 

**Chain of Custody Record** 

Client Information (Sub Contract Lab)				Kramer Jessica	Jes	S. Ca							į		Ġ	3			<u></u>	890-628 3		
	Phone:			E-Mail	hom	3	1	5	3			<u>z ω</u>	State of Origin:	ongir	, =			-	<sub>-</sub> 및	Page:		
Company Eurofins Environment Testing South Centr				ZA	Accreditations Required (See note) NELAP - Louisiana, NELAP	- Lo	Requir	red (So	ELA note	. "	Texas	ŀ			ľ				ထွ မ	Job #: 890-1960-1		
	Due Date Requested 2/22/2022	-			ı	- 1			Ana		lysis Requested	<u> </u>	este	٥					<u> </u>	ation Code	v.	
City Midland	TAT Requested (days):	rs):				_					-	$\dashv$	$\dashv$		-	$\dashv$	$\dashv$		O ⊞ >	- HCL NaOH Zn Acetate	M - Hexane N None O AsNaO2	
State, Zip: TX, 79701																			ı <i>m</i> □	Nitric Acid NaHSO4	P Na2O4S Q - Na2SO3	
Phone 432-704-5440(TeI)	PO #:			) )		TPH	de											190	ד ה ד	Amchlor Ascorbic Acid	S H2SO4 T - TSP Dodecahydrafe	
Email	WO#:			or No		p Full	Chloric											ger jede Al	A Street Print	ice Di Water	U Acetone V - MCAA	
Project Name:	Project #:			(Yes		S_Pre	ACH	X												EDTA EDA	W pH 4-5 Z other (specify)	
	SSOW#			ample	vices needs to be the	15NM_	/DI_LE	alc BTI	<u>'</u>										00000000	Other:		
			-	Matrix Mered S	n MS/MS	D_NM/80	GFM_280	035FP_C	TEX_GC\	D_Calc								umber c	amber c			
Sample Identification - Client ID (Lab ID)	Sample Date	Sample (	(C=comp, o=v G=grab) BT=Tis	<u>₹</u> _	-	8015M	300_OF	8021B/		8015MC								Tasal I	lotair	Special Inst	Special Instructions/Note·	
	X		1	Code: X	X	Marati						1			-		4	V	$\triangle$			200200000
BH07 (890-1960-19)	2/15/22	15 36 Mountain	(0	Solid		×	×	×	×	×	<u> </u>						<u> </u>		-			
BH07A (890-1960-20)	2/15/22	15 41 Mountain	(0	Solid		×	×	×	×	×								T. a. a. A	<b>(4)</b>			_
BH07B (890-1960-21)	2/15/22	15 45 Mountain	(0)	Solid		×	×	×	×	×									4			
ВН08 (890-1960-22)	2/15/22	16 12 Mountain		Solid		×	×	×	×	×								2 1/2008	4			
ВНО8А (890-1960-23)	2/15/22	16 16 Mountain		Solid		×	×	×	×	×									F1 <del>44</del> 5/44			
																1-1-						<u> </u>
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC abovatory or characteristic and the samples must be shipped back to the Eurofins Environment Testing South Central LLC abovatory or characteristic and the samples must be shipped back to	esting South Central	I LLC places the	e ownership of me	athod analytis must be sh	e & acc	redita back to	tion cc	on the	nce up	on ou	t subc	ontrac sting S	t labo	ratorie	said II	is sar	nple s	hipme or off	er in	forwarded under cha	in-of-custody If the vided. Any changes to	
Possible Hazard Identification Unconfirmed					San		Disp Sturn	To C	Sample Disposal ( A fe	ee m	e may be assessed if samples  Disposal By Lab	o as	<mark>assessed if san</mark> Disposal By Lab	ed if	san	ples	⊓are	□eta A	chiv	are retained longer than 1 month)  Archive For Mon	month) Months	L
Deliverable Requested I II III IV Other (specify)	Primary Deliverable Rank	ble Rank 2			Spe	cial	nstru	ction	Special Instructions/QC		Requirements	nent	U,									
Empty Kit Relinquished by		Date		1	Time			>		Ì			_	Method of Shipment:	of St	ipmei	ñ					
Relinquished by (Im by 3.14.2a	Date/Time		Company	pany		Received	vea		Contraction of the	<b>A</b>	3	2	2	M		Date/Time	me				Company	
	Date/Time:		Company	pany		Received	Ved by	ζ.								Date∕Time	me.				Company	<u> </u>
J	Date/Time		Company	pany		Rece	Received by	`							L,	Date/Time	me.				Company	L
Custody Seals Intact.   Custody Seal No						Coole	r Tem	peratu	Cooler Temperature(s) °C		and Other Remarks	Rem	arks									

Environment Testing America

🖏 eurofins

Ver 06/08/2021

# **Login Sample Receipt Checklist**

 Client: WSP USA Inc.
 Job Number: 890-1960-1

 SDG Number: 31402309.16

List Source: Eurofins Carlsbad

Login Number: 1960 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	

4

3

4

6

8

10

12

10

# **Login Sample Receipt Checklist**

Client: WSP USA Inc.

Job Number: 890-1960-1 SDG Number: 31402309.16

List Source: Eurofins Midland

List Creation: 02/17/22 01:10 PM

Creator: Kramer, Jessica

Login Number: 1960

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	N/A	

3

4

**5** 

9

11

13

14

<6mm (1/4").

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	
District RP	
Facility ID	
Application ID	

# **Release Notification**

# **Responsible Party**

Responsible Party			OGRID				
Contact Name			Contact Te	Contact Telephone			
Contact email			Incident #	Incident # (assigned by OCD)			
Contact mail	ing address			1			
			Location	of Release Se	ource		
<b>.</b>							
Latitude			(NAD 83 in de	Longitude _cimal degrees to 5 decin	nal places)		
Site Name				Site Type			
Date Release	Discovered			API# (if app	olicable)		
Unit Letter	Section	Township	Range	Cour	nty	7	
Crude Oi		l(s) Released (Select al Volume Release	ll that apply and attach	d Volume of l		e volumes provided below) overed (bbls)	
Produced	Water	Volume Release	ed (bbls)		Volume Reco	overed (bbls)	
		Is the concentrate produced water	tion of dissolved c >10,000 mg/l?	chloride in the	Yes 1	No	
Condensa	nte	Volume Release			Volume Recovered (bbls)		
Natural Gas Volume Released (Mcf)				Volume Reco	overed (Mcf)		
Other (describe) Volume/Weight Released (provide units)			e units)	Volume/Wei	ght Recovered (provide units)		
Cause of Rel	ease						

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Was this a major If release as defined by	f YES, for what reason(s) does the responsit	ble party consider this a major release?
19.15.29.7(A) NMAC?		
☐ Yes ☐ No		
If VFS, was immediate notice	ce given to the OCD? By whom? To whom	n? When and by what means (phone, email, etc)?
Tr TES, was miniculate notice	ce given to the GGB. By whom: To whom	in Whon and by What means (phone, email, etc).
	Initial Res	ponse
The responsible part	ty must undertake the following actions immediately w	nless they could create a safety hazard that would result in injury
☐ The source of the release	se has been stopped.	
	been secured to protect human health and the	e environment.
Released materials have	e been contained via the use of berms or dike	es, absorbent pads, or other containment devices.
All free liquids and reco	overable materials have been removed and n	nanaged appropriately.
If all the actions described al	above have <u>not</u> been undertaken, explain wh	y:
has begun, please attach a n	narrative of actions to date. If remedial eff	ediation immediately after discovery of a release. If remediation orts have been successfully completed or if the release occurred ase attach all information needed for closure evaluation.
		t of my knowledge and understand that pursuant to OCD rules and
public health or the environmentailed to adequately investigate	nt. The acceptance of a C-141 report by the OCI e and remediate contamination that pose a threat t	ations and perform corrective actions for releases which may endanger of 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
_		Ti4lo.
Printed Name		Title:
Signature:		Date:
email:	, 	Telephone:
OCD Only		
Received by: Ramona Man	ircus [	Date: 8/31/2021

				L48 Spill Volume					
Received by OCD:	4/25/2022 9: <b>1</b> 3	7:36 AM lity Name & Number:	NOCASTER 19 FE	CASTER 19 FEDERAL #4H BATTERY (LEASE #NM68820) NAPP21				50596	Page 1111eof 116
		Asset Area:	NDBE - DB EAST F	ROUTE					
-	Re	elease Discovery Date & Time:	8/19/21 @ 11:00P	M					
		Release Type:	Oil						
	Provide any k		ENT. BLEW DIAPHRAM ON PRODUCTION KO OIL DUMP WHICH CAUSED THE DUMP VALVE NOT TO OPEN AND FILLED KO THEN FILLED SCRUBBER AND WENT OUT FLARE LINE FROM FLARE FIRE SOFTENED THE WATER TRANSFER POLY LINE CAUSING IT TO RESULTING IN THE MIXTURE OF FLUIDS				FLARE LINE, HEAT		
Was the release on pad or off-pad? See reference table below									
Has it rained at least a half inch in the last 24 hours?									
Convert Irregular shape into a series of rectangles	Length (ft.)	Width (ft.)	Depth (in.)	Soil Spilled-Fluid Saturation	Estimated volume of each area (bbl.)	Total Estimated Volume of Spill (bbl.)	Percentage of Oil if Spilled Fluid is a Mixture	Total Estimated Volume of Spilled Oil (bbl.)	Total Estimated Volume of Spilled Liquid other than Oil (bbl.)
Rectangle A	50.0	30,0	0.38	15.12%	8.344	1.262			
Rectangle B	30.0	4.0	0.75	15.12%	1.335	0.202			
Rectangle C	30.0	3.5	0.63	15.12%	0.973	0.147			
Rectangle D	30.0	3.0	0.50	15.12%	0.668	0.101			

0.417

0.223

0.042

0.000

0.000

0.000

Total Volume Release:

0.063

0.034

0.006

0.000

0.000

0.000

1.815

15.12%

15.12%

15.12%

30.0

30.0

10.0

Released to Imaging: 8/1/2022 3:57:10 PM1

2.5

2.0

1.5

0.38

0.25

0.19

Rectangle E

Rectangle F

Rectangle G

Rectangle H

Rectangle I

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D	NA PP212/350506	

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# **Site Assessment/Characterization**

t his information must be provided to the appropriate district office no taler than 90 days after the release discovery date.				
What is the shallowest depth to groundwater beneath the area affected by the release?	<u>&gt;100</u> (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 vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.				
Characterization Report Checklist: Each of the following items must be included in the report.				
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring well	ls.			

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

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

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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.				
Printed Name: Charles Beauvais	Title: Senior Environmental Engineer			
Signature: Charles R. Beauvais 99	Date: 03/25/2022			
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043			
OCD Only				
Received by:	Date:			

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# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.						
<ul> <li>☑ Detailed description of proposed remediation technique</li> <li>☑ Scaled sitemap with GPS coordinates showing delineation poin</li> <li>☑ Estimated volume of material to be remediated</li> <li>☑ Closure criteria is to Table 1 specifications subject to 19.15.29</li> <li>☑ Proposed schedule for remediation (note if remediation plan times)</li> </ul>	9.12(C)(4) NMAC					
Deferral Requests Only: Each of the following items must be co	onfirmed as part of any request for deferral of remediation.					
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.						
Extents of contamination must be fully delineated.						
Contamination does not cause an imminent risk to human health, the environment, or groundwater.						
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.						
Printed Name: Charles Beauvais_	Title:Senior Environmental Engineer					
Printed Name: Charles Beauvais Signature: Beauvais 97	Date: 03/25/2022					
email:Charles.R.Beauvais@conocophillips.com	Telephone:575-988-2043					
OCD Only						
Received by:	Date:					
Approved Approved with Attached Conditions o	of Approval Denied Deferral Approved					
Signature:	Date:					

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Incident ID	NAPP2124350596
District RP	
Facility ID	
Application ID	

# **Remediation Plan**

Remediation Plan Checklist: Each of the following items must be included in the plan.				
<ul> <li>Detailed description of proposed remediation technique</li> <li>Scaled sitemap with GPS coordinates showing delineation points</li> <li>Estimated volume of material to be remediated</li> <li>Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC</li> <li>Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)</li> </ul>				
Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.				
Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.				
Extents of contamination must be fully delineated.				
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Printed Name: Charles Beauvais Title: Senior Environmental Engineer  Signature: Date: 03/25/2022				
Signature: Charles R. Beauvais 99  Date: 03/25/2022				
email:Charles.R.Beauvais@conocophillips.com Telephone:575-988-2043				
OCD Only				
Received by: Robert Hamlet Date: 8/1/2022				
Approved				
Signature: Robert Hamlet Date: 8/1/2022				

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 101129

#### **CONDITIONS**

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave	Action Number:
Midland, TX 79701	101129
	Action Type:
	[C-141] Release Corrective Action (C-141)

#### CONDITIONS

С	reated By	Condition	Condition Date
	rhamlet	The Remediation Plan is Conditionally Approved. Samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. Floor confirmation samples should be delineated/excavated to meet closure criteria standards for site assessment/characterization/proven depth to water determination. Sidewall samples should be delineated/excavated to 600 mg/kg for chlorides and 100 mg/kg for TPH. Confirmation samples should be collected every 200 ft2. All off pad areas must contain a minimum of 4 feet non-waste containing uncontaminated, earthen material with chloride concentrations less than 600 mg/kg and less than 100 mg/kg for TPH. Also in the pasture area, 4 feet below ground surface; soil contamination limits revert back to Table 1 in the spill rule and need to meet closure criteria standards for proven depth to water determination. The work will need to occur in 90 days after the work plan has been approved.	