Location:	James Ranch Unit DI 1A							
Spill Date:	10/26/2023							
	Area 1							
Approximate A	rea = 5499.00	sq. ft.						
Average Satura	tion (or depth) of spill = 1.00	inches						
Average Porosity Factor = 0								
	VOLUME OF LEAK							
Total Crude Oil	= 0.00	bbls						
Total Produced	Total Produced Water = 9.45							
	TOTAL VOLUME OF LEAK							
Total Crude Oil	= 0.00	bbls						
Total Produced	Water = 9.45	bbls						
TOTAL VOLUME RECOVERED								
Total Crude Oil	= 0.00	bbls						
Total Produced	Water = 7.00	bbls						

Attachment 4

•

pill Coo	rdinates: 32.38001, -103.88664	X: 604730	Y: 3583103
	ific Conditions	Value	Unit
1	Depth to Groundwater	110	feet
2	Within 300 feet of any continuously flowing	912	feet
3	watercourse or any other significant watercourse Within 200 feet of any lakebed, sinkhole or playa lake (measured from the ordinary high-water mark)	8,198	feet
4	Within 300 feet from an occupied residence, school, hospital, institution or church	9,724	feet
5	 i) Within 500 feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 	1,221	feet
	ii) Within 1000 feet of any fresh water well or spring		feet
6	Within incorporated municipal boundaries or within a defined municipal fresh water field covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978 as amended, unless the municipality specifically approves	No	(Y/N)
7	Within 300 feet of a wetland	7,337	feet
8	Within the area overlying a subsurface mine	No	(Y/N)
9	Within an unstable area (Karst Map)	High	Critical High Medium Low
10	Within a 100-year Floodplain	500	year
11	Soil Type	Largo Loam, 1 to 5 percent slopes	
12	Ecological Classification	Loamy- R070BC007NM	
13	Geology	Qp	
	NMAC 19.15.29.12 E (Table 1) Closure Criteria	<50'	<50' 51-100' >100'

New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)		•					2=NE (3=SW 4=	,	D83 UTM in me	ters)	(1	n feet)	
	POD Sub-	(Q		0 0111			9000	(1.0)				Depth	Water
POD Number	Code basin Co	ounty	64	16 4	i S	ec T	ſws	Rng		х	Y	Distance			Column
C 03015	CUB I	ED	1	4	3 2	22 2	22S	30E	60609	99	3582353* 🌍	1560	1316	262	1054
C 03679 POD1	CI	ED	1	4	2	14 2	24S	33E	6035	67	3581547 🌍	1942	700	575	125
<u>C 02724</u>	CUB I	ED	4	4	2 2	29 2	22S	30E	6038	60	3581329* 🌍	1975	503		
<u>C 02723</u>	CUB I	ED	2	2	3	15 2	22S	30E	60628	82	3584363* 🌍	1999	651		
<u>C 02111</u>	CUB I	ED	2	2	2 3	33 2	22S	30E	6055	05	3580336* 🌍	2873	248	155	93
C 03220 EXPLORE	CUB I	ED	1	3	4 :	33 2	22S	30E	6049	11	3579127* 🌍	3980	224		
C 02950 EXPL	CUB I	ED	4	2	4 2	23 2	22S	30E	60874	40	3582576* 🌍	4044	845		
<u>C 02637</u>	CUB I	ED	1	3	3 2	24 2	22S	30E	6089	50	3582377* 🌍	4281	759		
C 03587 POD3	CUB I	ED	2	4	1 (07 2	22S	29E	6014	47	3586271 🌍	4562	80	47	33
C 04528 POD1	CUB I	ED	1	3	3	12 2	22S	30E	6088	86	3585625 🌍	4861			
											Avera	ge Depth to	Water:	259	feet
												Minimum	Depth:	47	feet
												Maximum	Depth:	575	feet
Record Count: 10															

Record Count: 10

UTMNAD83 Radius Search (in meters):

Easting (X): 604730

Northing (Y): 3583103

Radius: 5000

*UTM location was derived from PLSS - see Help

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

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New Mexico Office of the State Engineer Active & Inactive Points of Diversion

(with Ownership Information)

						(R=POD has been rep and no longer serves the	this file, (quai						
	(acre ft	per annum)				C=the file is closed)	(quai	rters ar	e sma	llest to largest)	(NAD83	UTM in meters)
	Sub				Well			qqq					
WR File Nbr	basin Use Dive	ersion Owner	Count	y POD Number	Tag	Code Grant	Source	6416 4	Sec	Tws Rng	Х	Y	Distance
<u>C 01916</u>	C PRO	0 PERRY R BASS	ED	<u>C 01916</u>				432	21	22S 30E	605068	3582947* 🧲	372
<u>C 03015</u>	CUB MON	0 U.S. DEPT OF ENERGY - WIPP	ED	<u>C 03015</u>			Artesian	143	22	22S 30E	606099	3582353* 🍯	1560
Record Count	• 2												

UTMNAD83 Radius Search (in meters):

Easting (X): 604730

Northing (Y): 3583103

Radius: 1610

Sorted by: Distance

*UTM location was derived from PLSS - see Help

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



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Well Plugging Plan Version: December, 2011

Page 1 of 5

2-1916

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NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging.

<u>I. FILING FEE:</u> There is no filing fee for this form.

.

II. GENERAL / WELL OWNERSHIP:

Existin	g Office of the State I	Engineer POD Numbe	r (Well Nu	mber) for we	ll to be plugg	ed: <u>C 019</u>	<u>916</u>				
Name	of well owner: <u> </u>	OPCO L.P.									
Mailin	g address:P	O. Box 2760									
City: _	Midland		State:	Te	xas	Zip	o code: _	79702			
Phone	number:4.	32- 556 -8730		_ E-mail: _	TASav	oie@Basspet.co	om				
n w	ELL DRILLER INF										
	Driller contracted to pro-		26.	Straub Cor	poration – Ray	vmond Straub					
	1exico Well Driller Li										
NC VY 1V	lexied wen briner Er		0/17		C.Npii		Julie	2015			
	ELL INFORMATIC		well to be p	lugged shou	d be attached	to this plan.	2013 APR -	ATE ENGIN			
)	GPS Well Location	: Latitude: Longitude:	32 -103	_deg, <u>22</u> _deg, <u>53</u>	min, min,	<u>54.42</u> sec <u>00.57</u> sec,	NAD 83	IEER OF			
2)	Reason(s) for plugg	ing well:	Water v	vell is in the	path of new c	onstruction. Wa	ter quality	y is below			
							٩ ا	2 m			
3)	what hydrogeologic	ny type of monitoring parameters were mo from the New Mexic	onitored.	If the well w	vas used to n	nonitor contami	inated or	poor quali			
l)	Does the well tap brackish, saline, or otherwise poor quality water? <u>YES</u> If yes, provide additional detail,										
	including analytical results and/or laboratory report(s): See Attachments										
5)	Static water level:	~110 feet below la	nd surface /	feet above l	and surface	(circle one)					

6) Depth of the well: <u>188</u> feet

7)	Inside diameter of innermost casing: <u>5</u> inches.
8)	Casing material:Steel
9)	The well was constructed with:
	UNKWN an open-hole production interval, state the open interval:
	<u>UNKWN</u> a well screen or perforated pipe, state the screened interval(s):
10)	What annular interval surrounding the artesian casing of this well is cement-grouted?NA
11)	Was the well built with surface casing?UNKWN If yes, is the annulus surrounding the surface casing
	grouted or otherwise sealed? If yes, please describe:

yes ____ If not, describe 12) Has all pumping equipment and associated piping been removed from the well? remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal.

1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well: The casing will be cut off below ground surface. A tremie line will be install and a Portland Type II/ V Cement grout will be placed from the bottom to within 5' of the surface. A concrete cap will be placed from 5' to 1' and the remainder will be filled with soil.

Will well head be cut-off below land surface after plugging? _____ yes 2)

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant

- 1) For plugging intervals that employ cement grout, complete and attach Table A.
- For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B. 2)
- 3)
- Theoretical volume of grout required to plug the well to land surface: <u>20 Sacks</u> Type of Cement proposed: <u>See Attached Conditions of Approval C.G</u> <u>See Attached Conditions of Approval C.G</u> Proposed cement grout mix: <u>8</u> gallons of water per 94 pound sack of Portland cement. 4)
- 5)
- Will the grout be: _____ batch-mixed and delivered to the site 6)

X ____ mixed on site

7) Grout additives requested, and percent by dry weight relative to cement: _____ Salt water gel - The use of Fuller's Earth is to help with leak-off to the formation. Since the formation water is high in chlorides, Volclay Sodium Bentonite will not be acceptable. 5 LBS. of Gel per 94 LBS. of cement

SEE Attached Conditions of Affroval

8)

Additional notes and calculations: _____ ((dia.² * 0.005454)*Depth)/ 1.25 cuft-bag

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

The Public Land Survey is Section 21, Township 22 South, Range 30 East.

VIII. SIGNATURE:

I, <u>Raymond L Straub Jr., P.G.</u>, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

	03/28/2013
Signature of Applicant	Date RON
IX. ACTION OF THE STATE ENGINEER:	TATE ENG OSWEIT
This Well Plugging Plan of Operations is:	A-1 P
Approved subject to the attached conditions. Not approved for the reasons provided on the attached letter.	P I: Io
Witness my hand and official seal this/ T * day of April	<u>, 13 5</u>
Scott A. Verhines, State Engineer	

By: Lin Willing

Tim Williams Carlsbad Basin Watermaster

Well Plugging Plan Version: December, 2011 Page 3 of 5 ,

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	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)			5 feet
Bottom of proposed interval of grout placement (ft bgl)			188 feet
Theoretical volume of grout required per interval (gallons)			20 Sacks
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement			8 gallons
Mixed on-site or batch- mixed and delivered?			On-site
Grout additive 1 requested			5% Saltwater Bentonite
Additive 1 percent by dry weight relative to cement			5 LBS.
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			STATE ENGINEER, OFFICE RINSWEIN 113 APR -1 P 1: 10

Well Plugging Plan Version: December, 2011 Page 4 of 5

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant of grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			



Well Plugging Plan Version: December, 2011 Page 5 of 5



STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

ROSWELL

Scott A. Verhines, P.E. State Engineer DISTRICT II 1900 West Second St. Roswell, New Mexico 88201 Phone: (575) 622-6521 Fax: (575) 623-8559

April 17, 2013

BOPCO, L.P. P.O. Box 2760 Midland, Texas 79702

RE: Well Plugging Plan of Operations for C-1916

Greetings:

Enclosed is your copy of the Well Plugging Plan for the above referenced project. The attached Conditions of Approval modify your Plan in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted August 31, 2005 by the State Engineer. Should you have any questions about the Plan or Conditions of Approval please do not hesitate to contact our office.

Sincerely,

Catherine Goetz

Water Resource Specialist District II Office of the State Engineer

Enclosures

cc: Office of the State Engineer Santa Fe Straub Corporation

Analytical Laboratory Report for: BOPCO



Account Representative: Willis Mossman

Production Water Analysis

Listed below please find water analysis report from: Perry R Bass Wsw, WATER SUPPLY WELL

Lab Test Number		Sample Date	
201301003615		02/13/2013	
Specific Gravity:	1.100		
TDS:	153402		
pH:	6.65		
Cations		mg/L_	
Calcium as Ca ^{**}		2669	
Magnesium as Mg ^{``}		2188	
Sodium as Na		52812	
Iron as Fe ^{^{···}}		9.49	
Potassium as K [*]		7466.0	
Barium as Ba ⁺⁺		0.28	
Strontium as Sr		86.46	
Manganese as Mn^{\leftrightarrow}		0.46	
Anions		mg/L	
Bicarbonate as HCO ₃		171	
Sulfate as SO4		6500	ts 2
Chloride as Cl		81500	A EIG
Gases		mg/L	2013 APR - 1
Carbon Dioxide as CO,		30	
Hydrogen Sulfide as H ₂ S			U
Tryarogen ounde as n ₂ 0		0.0	יין מ
Lab Comments:			
SURFACE TEMP.=65.7°F			

Analytical Laboratory Report for: BOPCO

Account Representative: Willis Mossman

DownHole SAT[™] Scale Prediction @ 250 deg. F

Lab Test Number	Sample Date	Location	
201301003615	02/13/2013	WATER SUPPLY WELL	
Mineral Scale	Saturation Index	Momentary Excess (Ibs/1000 bbls)	
Calcite (CaCO3)	0.46	-0.05	
Strontianite (SrCO3)	0.00	-25.80	
Anhydrite (CaSO4)	6.85	1699.09	
Gypsum (CaSO4*2H2O)	1.55	710.25	
Barite (BaSO4)	0.07	-6.67	
Celestite (SrSÓ4)	0.23	-487.80	
Siderite (FeCO3)	3.44	0.04	
Halite (NaCl)	0.04	-545840.63	
Iron sulfide (FeS)	0.00	-1.34	

Interpretation of DHSat Results:

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) to positive (precipitating) values. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.





New Mexico Office of the State Engineer Transaction Summary

72121 All Applications Under Statute 72-12-1

Seconda	Status: EX ary Status: EX	P Exp	bired Permit bired			
	Assigned: mv	•				
/	Applicant: PE	RRY R.	BASS			
Events						
	Date	Туре	Description	Comment	Proces	saed By
	07/31/1980	APP	Application Received	*	mvigil	
	08/04/1980	FIN ·	Final Action on application		mvigil	
	08/04/1980	WAP	General Approval Letter		mvigil	
	09/01/1981	EXP	Expired Permit (well log late)		mvigil	
			is Diversion Consumpt			
	oint of Diversio 01916 "An (") after nor KS	ihing valu 	3 605068 3582947* e indicates UTM location was derive			
**Pe C	oint of Diversio 01916 "An (") after nor KS	ihing valu 	3 605068 3582947*	DEVELOPMEN RESOURCE ad from PL\$S - see Hel		ROSVIN
**Pe C Remark	oint of Diversio 01916 "An (*) after nor (S WATER SU #12.	ihing valu 	3 605068 3582947* e indicates UTM location was derive	DEVELOPMEN RESOURCE ad from PL\$S - see Hel		ROSVITI
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**Pe C Remark	oint of Diversion 01916 *An (*) after norm water norm water sub- water sub- sub- cons Appropriation one year from A totalizing r line from the Engineer; the date of instal water; pumpi	PPLY W n and us n the da neter sh e well a e Engine lilation, a ing record	3 605068 3582947* • Indicates UTM location was derive VELL FOR THE DRILLING C	DEVELOPMEN RESOURCE ad from PLSS - see Hel DF JAMES RANCH hall not exceed a per- t branch of the dis acceptable to the ike, model, serial n or prior to appropria district Supervisor for	IF OF NA IP H UNIT eriod of charge a State number, ation of	ROSVITI
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**Po C Remark Conditi 3 5A	oint of Diversion 01916 *An (*) after norm water norm water, pumpicalendar mon the well shi	PPLY W PPLY W n and us m the da meter sh e well a e Engine illation, a ing recon nth on o all be pl port sha	3 605068 3582947* e indicates UTM location was derived VELL FOR THE DRILLING C ve of water under this permit shate of approval. The of approval. The installed before the first and the installed before the first and the installation shall be per shall be advised of the mater ros shall be submitted to the D r before the 10th day of the fol lugged upon completion of t	DEVELOPMEN RESOURCE ad from PLSS - see Hel DF JAMES RANCH hall not exceed a per- t branch of the dis acceptable to the ke, model, serial n or prior to appropria District Supervisor for lowing month. he permitted use,	IT OF NA IP H UNIT eriod of charge a State number, ation of or each and a	ROSVITI

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.

Conditions of Approval for C-1916 abandonment:

1) Plugging operations will be conducted in accordance with NMED, NMOCD, or other State or Federal agency having oversight for the above described project.

2) The well shall be plugged using a cement slurry (5.2 gals water per 94lb bag of Portland cement). It is understood that due to the high sulfate content Type V cement will be used as the data provided on water quality indicates 6,500 ppm sulfates. The cement grout will be pumped via tremie line from bottom up.

3) By item 2 above, the plan meets OSE requirements for tremie/grout abandonment, however, well records are not available to confirm well design/annular seals.



U.S. Fish and Wildlife Service

National Wetlands Inventory

JRU DI 1A CTB watercourse 912 ft



Other

Riverine

Freshwater Forested/Shrub Wetland

Freshwater Pond

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

Released to Imaging: 5/10/2024 11:00:40 AM

National Wetlands Inventory (NWI) This page was produced by the NWI mapper U.S. Fish and Wildlife Service

National Wetlands Inventory

James Ranch Unit DI 1A CTB Lake



Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

Released to Imaging: 5/10/2024 11:00:40 AM

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Lake Other Riverine Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



U.S. Fish and Wildlife Service

National Wetlands Inventory

James Ranch Unit DI 1A CTB Wetland

Page 20 of 326



August 3, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland Freshwater Forested/Shrub Wetland
- Freshwater Pond

Lake Other Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Released to Imaging: 5/10/2024 11:00:40 AM

National Wetlands Inventory (NWI) This page was produced by the NWI mapper

James Ranch Unit DI 1A CTB Mine



8/3/2023, 1:22:37 PM



Esri, HERE, Garmin, iPC, Maxar



Received by OCD: 4/29/2024 11:25:14 AM National Flood Hazard Layer FIRMette



Legend

Page 23 of 326



Basemap Imagery Source: USGS National Map 2023



USDA Natural Resources Conservation Service Released to Imaging: 5/10/2024 11:00:40 AM

Web Soil Survey National Cooperative Soil Survey 8/3/2023 Page 1 of 3



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ВВ	Berino complex, 0 to 3 percent slopes, eroded	0.3	0.4%
LA	Largo loam, 1 to 5 percent slopes	51.4	76.9%
PD	Pajarito-Dune land complex, 0 to 3 percent slopes	10.5	15.8%
RO	Rock land	4.6	6.9%
Totals for Area of Interest		66.8	100.0%





USDA United States Department of Agriculture

> Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eddy Area, New Mexico



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/? cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map (James Ranch Unit DI 1A CTB)	
Legend	
Map Unit Legend (James Ranch Unit DI 1A CTB)	
Map Unit Descriptions (James Ranch Unit DI 1A CTB)	
Ėddy Area, New Mexico	13
BB—Berino complex, 0 to 3 percent slopes, eroded	
LA—Largo loam, 1 to 5 percent slopes	
PD—Pajarito-Dune land complex, 0 to 3 percent slopes	
RO—Rock land	17
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

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MAP	LEGEND	MAP INFORMATION	
Area of Interest (AOI) Area of Interest (AOI) Soils	 Spoil Area Stony Spot Very Stony Spot 	The soil surveys that comprise your AOI were mapped at 1:20,000.	
 Soil Map Unit Polygons Soil Map Unit Lines Soil Map Unit Points Special Point Features Blowout Borrow Pit 	 Very Stony Spot Wet Spot Other Special Line Features Water Features Streams and Canals 	Warning: Soil Map may not be valid at this scale. Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.	
Image: Second system Borrow Pit Image: Second system Clay Spot Image: Closed Depression Gravel Pit Image: Second system Gravelly Spot	Transportation ← Rails ← Interstate Highways ← US Routes ← Major Roads	Please rely on the bar scale on each map sheet for map measurements. Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)	
 Landfill Lava Flow Marsh or swamp Mine or Quarry 	Local Roads Background Aerial Photography	Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.	
 Miscellaneous Water Perennial Water Rock Outcrop Saline Spot Sandy Spot 		This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. Soil Survey Area: Eddy Area, New Mexico Survey Area Data: Version 18, Sep 8, 2022 Soil map units are labeled (as space allows) for map scales	
 Severely Eroded Spot Sinkhole Slide or Slip Sodic Spot 		 1:50,000 or larger. Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020 The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor 	
Map Unit Legend (James Ranch Unit DI 1A CTB)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ВВ	Berino complex, 0 to 3 percent slopes, eroded	0.3	0.4%
LA	Largo loam, 1 to 5 percent slopes	51.4	76.9%
PD	Pajarito-Dune land complex, 0 to 3 percent slopes	10.5	15.8%
RO	Rock land	4.6	6.9%
Totals for Area of Interest	·	66.8	100.0%

Map Unit Descriptions (James Ranch Unit DI 1A CTB)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eddy Area, New Mexico

BB—Berino complex, 0 to 3 percent slopes, eroded

Map Unit Setting

National map unit symbol: 1w43 Elevation: 2,000 to 5,700 feet Mean annual precipitation: 5 to 15 inches Mean annual air temperature: 57 to 70 degrees F Frost-free period: 180 to 260 days Farmland classification: Not prime farmland

Map Unit Composition

Berino and similar soils: 60 percent Pajarito and similar soils: 25 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Berino

Setting

Landform: Plains, fan piedmonts Landform position (three-dimensional): Riser Down-slope shape: Convex Across-slope shape: Linear Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 17 inches: fine sand H2 - 17 to 58 inches: sandy clay loam H3 - 58 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Description of Pajarito

Setting

Landform: Dunes, plains, interdunes Landform position (three-dimensional): Side slope Down-slope shape: Convex, linear Across-slope shape: Convex, linear Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 9 inches: loamy fine sand *H2 - 9 to 72 inches:* fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 7e Hydrologic Soil Group: A Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Minor Components

Pajarito

Percent of map unit: 4 percent Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Wink

Percent of map unit: 4 percent Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Cacique

Percent of map unit: 4 percent Ecological site: R070BD004NM - Sandy Hydric soil rating: No

Kermit

Percent of map unit: 3 percent Ecological site: R070BD005NM - Deep Sand Hydric soil rating: No

LA—Largo loam, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: 1w4y Elevation: 2,000 to 5,700 feet Mean annual precipitation: 6 to 14 inches Mean annual air temperature: 57 to 70 degrees F Frost-free period: 180 to 260 days Farmland classification: Not prime farmland

Map Unit Composition

Largo and similar soils: 98 percent Minor components: 2 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Largo

Setting

Landform: Plains, alluvial fans Landform position (three-dimensional): Talf, rise Down-slope shape: Convex, linear Across-slope shape: Linear Parent material: Calcareous alluvium

Typical profile

H1 - 0 to 4 inches: loam *H2 - 4 to 47 inches:* silt loam *H3 - 47 to 65 inches:* loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 7e Hydrologic Soil Group: B Ecological site: R070BC007NM - Loamy Hydric soil rating: No

Minor Components

Largo

Percent of map unit: 1 percent *Ecological site:* R070BC017NM - Bottomland *Hydric soil rating:* No

Pajarito

Percent of map unit: 1 percent Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

PD—Pajarito-Dune land complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w55 Elevation: 3,000 to 5,000 feet Mean annual precipitation: 10 to 15 inches Mean annual air temperature: 60 to 64 degrees F Frost-free period: 190 to 220 days Farmland classification: Not prime farmland

Map Unit Composition

Pajarito and similar soils: 46 percent Dune land: 45 percent Minor components: 9 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pajarito

Setting

Landform: Plains, interdunes, dunes Landform position (three-dimensional): Side slope Down-slope shape: Convex, linear Across-slope shape: Linear, convex Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 9 inches: fine sandy loam H2 - 9 to 36 inches: fine sandy loam H3 - 36 to 72 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent Depth to restrictive feature: More than 80 inches Drainage class: Well drained Runoff class: Very low Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)

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Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum content: 15 percent Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum: 1.0 Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e Land capability classification (nonirrigated): 7e Hydrologic Soil Group: A Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Description of Dune Land

Setting

Landform: Dune fields Landform position (two-dimensional): Shoulder, backslope, footslope Landform position (three-dimensional): Talf Down-slope shape: Convex, linear Across-slope shape: Convex, linear Parent material: Mixed alluvium and/or eolian sands

Typical profile

H1 - 0 to 6 inches: sandy loam *H2 - 6 to 60 inches:* sandy loam

Interpretive groups

Land capability classification (irrigated): None specified Ecological site: R070BD003NM - Loamy Sand Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 5 percent Hydric soil rating: No

Largo

Percent of map unit: 4 percent Ecological site: R070BC007NM - Loamy Hydric soil rating: No

RO—Rock land

Map Unit Setting

National map unit symbol: 1w5h Elevation: 2,000 to 5,700 feet Mean annual precipitation: 6 to 24 inches

Custom Soil Resource Report

Mean annual air temperature: 57 to 70 degrees F *Frost-free period:* 180 to 260 days *Farmland classification:* Not prime farmland

Map Unit Composition

Rock land: 97 percent Minor components: 3 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rock Land

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8s Hydric soil rating: No

Minor Components

Pajarito

Percent of map unit: 1 percent *Ecological site:* R070BD003NM - Loamy Sand *Hydric soil rating:* No

Simona

Percent of map unit: 1 percent Ecological site: R070BD002NM - Shallow Sandy Hydric soil rating: No

Potter

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

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Web Soil Survey National Cooperative Soil Survey 8/3/2023 Page 1 of 3

MAP LEGEND	MAP INFORMATION
Area of Interest (AOI)	The soil surveys that comprise your AOI were mapped at
Area of Interest (AOI)	1:20,000.
Soils	Warning: Soil Map may not be valid at this scale.
Soil Rating Polygons	Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil
R070BD003NM Not rated or not available	line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed
	scale.
Soil Rating Lines	Please rely on the bar scale on each map sheet for map measurements.
R070BD003NM	Source of Map: Natural Resources Conservation Service Web Soil Survey URL:
	Coordinate System: Web Mercator (EPSG:3857)
Soil Rating Points R070BC007NM	Maps from the Web Soil Survey are based on the Web Mercato projection, which preserves direction and shape but distorts
R070BD003NM	distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more
Not rated or not available	accurate calculations of distance or area are required.
Water Features Streams and Canals	This product is generated from the USDA-NRCS certified data
	of the version date(s) listed below.
Transportation +++ Rails	Soil Survey Area: Eddy Area, New Mexico Survey Area Data: Version 18, Sep 8, 2022
 Interstate Highways 	Soil map units are labeled (as space allows) for map scales
JS Routes	1:50,000 or larger.
📈 Major Roads	Date(s) aerial images were photographed: Feb 7, 2020—May 12, 2020
Local Roads	
Background Aerial Photography	The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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All Ecological Sites —

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
BB	Berino complex, 0 to 3 percent	Berino (60%)	R070BD003NM — Loamy Sand	0.3	0.4%
	slopes, eroded	Pajarito (25%)	R070BD003NM — Loamy Sand		
		Cacique (4%)	R070BD004NM — Sandy		
		Pajarito (4%)	R070BD003NM — Loamy Sand		
		Wink (4%)	R070BD003NM — Loamy Sand		
		Kermit (3%)	R070BD005NM — Deep Sand		
LA	Largo loam, 1 to 5 percent slopes	Largo (98%)	R070BC007NM — Loamy	51.4	76.9%
		Largo (1%)	R070BC017NM — Bottomland		
		Pajarito (1%)	R070BD003NM — Loamy Sand		
PD	Pajarito-Dune land complex, 0 to 3 percent slopes	Pajarito (46%)	R070BD003NM — Loamy Sand	10.5	15.8%
		Dune land (45%)	R070BD003NM — Loamy Sand		
		Rock outcrop (5%)			
		Largo (4%)	R070BC007NM — Loamy		
RO	Rock land	Rock land (97%)		4.6	6.9%
		Pajarito (1%)	R070BD003NM — Loamy Sand		
		Potter (1%)	R070BC025NM — Shallow		
		Simona (1%)	R070BD002NM — Shallow Sandy		
Totals for Area of Ir	nterest	•		66.8	100.0%





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<u>0303 Water Resources</u>	Groundwater

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Important: <u>Next Generation Monitoring Location Page</u>

Search Results -- 1 sites found

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• 322252103541401

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Available data for this site Groundwater: Field measurements V GO Eddy County, New Mexico Hydrologic Unit Code 13060011 Latitude 32°22'52", Longitude 103°54'14" NAD27 Land-surface elevation 3,065 feet above NAVD88 The depth of the well is 129 feet below land surface.

This well is completed in the Other aquifers (N9999OTHER) national aquifer. This well is completed in the Rustler Formation (312RSLR) local aquifer. Output formats

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

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Environmental Site Remediation Work Plan

General Information

NMOCD District:	District 2	Incident ID:	nAPP2331041267
Landowner:	Federal	RP Reference:	n/a
Client:	XTO Energy	Site Location:	James Ranch Unit DI 1A Tank Battery
Date:	April 26, 2024	Project #:	23E-04616
Client Contact:	Amy Ruth	Phone #:	432.661.0571
Vertex PM:	Chance Dixon	Phone #:	575.988.1472

Objective

The objective of the environmental remediation work plan is to identify exceedances found during the site assessment/characterization activity and propose an appropriate remediation technique to address these areas. Areas of environmental concern identified and delineated include: production equipment area and immediate surrounding open pad. The C-141 Report is included in Attachment 1. Closure criteria has been selected as per New Mexico Administrative Code 19.15.29. All applicable research as it pertains to closure criteria selection is presented in Attachment 4. The closure criteria for the site is presented below.

Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to groundwater less than			
10,000 mg/l TDS	Constituent	Limit	
	Chloride	20,000 mg/kg	
	TPH (GRO+DRO+MRO)	2,500 mg/kg	
> 100 feet	GRO+DRO	1,000 mg/kg	
	BTEX	50 mg/kg	
	Benzene	10 mg/kg	

TDS – Total dissolved solids

TPH – Total petroleum hydrocarbons = gasoline range organics (GRO) + diesel range organics (DRO) + motor oil range organics (MRO)

BTEX – Benzene, toluene, ethylbenzene, and xylenes

Site Assessment/Characterization

Site characterization was completed on February 21, 2024. A total of 23 sample points including background locations were established and collected for field screening. Samples at the deepest vertical distance below closure criteria were submitted to the laboratory for analysis. In total, 62 samples were submitted to Eurofins/Hall Environmental Laboratory, Carlsbad, New Mexico, for analysis. The sample locations are presented in Attachment 2. Laboratory analysis results have been compared to the above noted closure criteria and the results from the characterization activity are presented in Attachment 3. Exceedances are identified in the table as bold with a grey background. The laboratory data reports and chain-of-custody forms are included in Attachment 5.

Remedial Activities

General

Areas identified with contaminant concentrations above closure criteria will be remediated through excavation. Laboratory results from the site assessment/characterization have been referenced to estimate both the vertical and horizontal limits of the impacts and the volume of soil to be removed. Soil will be excavated to the extents of the known contamination or in 1 foot increments, whichever is less. Field screening will be utilized to confirm removal of contaminanted soil below the applicable closure criteria. Contaminated soils will be stored on a 30 mil liner prior to disposal at an approved facility. Once excavation is complete, confirmatory samples will be

Environmental Site Remediation Work Plan



collected and laboratory analysis completed to confirm closure criteria guidelines are met. Excavations will be backfilled with clean soil sourced locally.

Release Near Production Equipment – nAPP2331041267 (10-26-2023)

A total of 21 sample points were established in the release area around the production equipment, around all of the heater treaters and separators. A total of 62 samples were collected for analysis in the release area around the production equipment. Exceedances to closure criteria were identified at sample points BG24-01, BH24-01 to BH24-09, BH24-11 to BH24-13, BH24-17 and BH24-18. A 0.5 foot scrape will be conducted around BH24-02 to BH24-04, BH24-09 to BH24-15, and BH24-18 to BH24-20. A 1 foot excavation will be conducted around BH24-16 and BH24-17. A 1.5 foot excavation will be conducted around BH24-01, BH24-01, BH24-05, BH24-06 and BH24-08. A hydrovac truck and hand digging will be utilized to remove contaminated soil in close proximity to the equipment and infrastructure. Heavy equipment will be used to complete excavation outside of the containment on open pad. Field screening will be utilized to find the horizontal and vertical extents of the spill area. Confirmatory samples will be collected as per New Mexico Oil Conservation Division guidance and submitted for laboratory analysis of all applicable parameters. The estimated volume to be excavated is **120 cubic yards**.

Sample Point	Excavation Depth	Remediation Method
BH24-01	0.5'	Backhoe/ Handcrew
BH24-02	2.5'	Backhoe/ Handcrew
BH24-03	0.5'	Backhoe/ Handcrew
BH24-04	2.5'	Backhoe/ Handcrew
BH24-05	0.5'	Backhoe/ Handcrew
BH24-06	2.5'	Backhoe/ Handcrew
BH24-07	0.5'	Backhoe/ Handcrew
BH24-08	0.5'	Backhoe/ Handcrew
BH24-09	2.5'	Backhoe/ Handcrew
BH24-10	0.5'	Backhoe/ Handcrew
BH24-11	2.5'	Backhoe/ Handcrew
BH24-12	2.5'	Backhoe/ Handcrew
BH24-13	2.5'	Backhoe/ Handcrew
BH24-14	0.5'	Backhoe/ Handcrew
BH24-15	0.5'	Backhoe/ Handcrew
BH24-16	0.5'	Backhoe/ Handcrew
BH24-17	0.5'	Backhoe/ Handcrew
BH24-18	2.5'	Backhoe/ Handcrew
BH24-19	0.5'	Backhoe/ Handcrew
BH24-20	0.5'	Backhoe/ Handcrew



Should you have any questions or concerns, please do not hesitate to contact Chance Dixon at 575.988.1472 or cdixon@vertex.ca.

Austin Harris

Austin Harris, B.Sc. ENVIRONMENTAL SPECIALIST, REPORTING

4/29/2024

Date

Chance Dixon

4/29/2024

Date

Attachments

Chance Dixon, B.Sc.

Attachment 1. C-141 Report

Attachment 2. Characterization Sampling Site Schematic

Attachment 3. Initial Characterization Sample Field Screen and Laboratory Results – Depth to Groundwater <50 feet bgs

Attachment 4. Closure Criteria Research

PROJECT MANAGER, REPORT REVIEW

Attachment 5. Laboratory Data Reports and Chain-of-Custody Forms

Attachment 1

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

)

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Incident ID	nAPP2331041267
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380	
Contact Name Garrett Green	Contact Telephone 575-200-0729	
Contact email garrett.green@exxonmobil.com	Incident # (assigned by OCD)	
Contact mailing address 3104 E. Greene Street, Carlsbad, New Mexico, 88220		

Location of Release Source

Latitude 32.37986

(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit DI 1A Tank Battery	Site Type Tank Battery
Date Release Discovered 10/26/2023	API# (if applicable)

l	Unit Letter	Section	Township	Range	County
	F	21	228	30E	Eddy

Surface Owner: State 🗵 Federal 🗌 Tribal 🗌 Private (Name: _

Nature and Volume of Release

	l(s) Released (Select all that apply and attach calculations or specific	justification for the volumes provided below)
Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
▼ Produced Water	Volume Released (bbls) 9.45	Volume Recovered (bbls) 7.00
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	X Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
	l corrosion caused a 8" CS main PW line to release fluid arty contractor has been retained for remediation purpos	-

	4 11:25:14 AM State of New Mexico	Incident ID	Page nAPP2331041267
Page 2	Oil Conservation Division	District RP	
		Facility ID	
		Application ID	
Was this a major	If YES, for what reason(s) does the responsible part	rty consider this a major release?	
release as defined by	N/A		
19.15.29.7(A) NMAC?			
🗌 Yes 🗶 No			

58 of 326

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A

Initial Response

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

 \checkmark The source of the release has been stopped.

NA

x The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have <u>not</u> been undertaken, explain why:

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

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

Printed Name:	Title: Environmental Coordinator
Signature: Satt Suem	Date:
email: garrett.green@exxonmobil.com	Telephone:
OCD Only	
Received by:	Date:

Location:	James Ranch Unit DI 1A		
Spill Date:	10/26/2023		
	Area 1		
Approximate A	rea =	5499.00	sq. ft.
Average Satura	tion (or depth) of spill =	1.00	inches
Average Porosi	ty Factor =	0.03	
	VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	9.45	bbls
	TOTAL VOLUME OF LEAK		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	9.45	bbls
	TOTAL VOLUME RECOVERED		
Total Crude Oil	=	0.00	bbls
Total Produced	Water =	7.00	bbls

Attachment 2

Received by OCD: 4/29/2024 11:25:14 AM



Attachment 3

Client Name: XTO Energy, Inc. Site Name: James Ranch Unit DI 1A CTB NMOCD Tracking #: nAPP2331041267 Project #: 23E-04616

Image: state in the image in the i	Table 2. Initial Characterization Sample Field Screen and Laboratory Results - Depth to Groundwater <50 feet bgs Sample Description Field Screening Petroleum Hydrocarbons													
Sample ID Depth (rt) Sample Date Perform Second Stress		Sample Descr	iption	Fi	eld Screeni	ng			Petrole	um Hydrod	arbons	arbons		
Image: state in the image in the i				ds			Vola	atile			Extractable	5		Inorganic
BH24-01 0 January 19, 2024 ·<	Sample ID	Depth (ft)	Sample Date	-) (1) Chloride Concentration
BH24-01 2 January 19, 2024 - - 730 ND ND <th></th> <th>0</th> <th>lanuary 19 2024</th> <th>-</th> <th>-</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>1,300</th>		0	lanuary 19 2024	-	-									1,300
0 January 19, 2024 246 1,190 ND ND ND S5.4 ND S5.4 S5.4 BH24-02 3 February 13, 2024 85 1,740 ND	BH24-01			-	-								-	303
2 January 19, 2024 - 85 1,740 ND				-	246	1.190	ND	ND	ND	55.4	ND	55.4	55.4	598
BH24-02 3 February 13, 2024 - 34 548 ND ND </td <td>-</td> <td></td> <td></td> <td>-</td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>786</td>	-			-		-								786
4 February 13, 2024 . 31 500 .	BH24-02					-								320
6 February 13, 2024 - 54 500 -							-	-	-	-	-	-	-	-
BH24-03 0 January 19, 2024 - - 1,100 ND ND </td <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>- 1</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	-						- 1	-	-	-	-	-	-	-
BH24-03 2 January 19, 2024 - - 1,190 ND ND </td <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>390</td>				-			ND	ND	ND	ND	ND	ND	ND	390
BH24-04 0 January 19, 2024 - - 17,840 ND ND<	BH24-03				-									431
BH24-04 2 January 19, 2024 - - 3,340 ND ND </td <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>12,000</td>				-	-		ND	ND	ND	ND	ND	ND	ND	12,000
BH24-05 0 January 19, 2024 0 128 12,900 ND N	BH24-04			-	-	-								2,120
BH24-05 2 January 19, 2024 - - 8,310 ND ND </td <td></td> <td></td> <td></td> <td>0</td> <td>128</td> <td></td> <td>ND</td> <td>ND</td> <td>ND</td> <td></td> <td>ND</td> <td>ND</td> <td></td> <td>12,700</td>				0	128		ND	ND	ND		ND	ND		12,700
BH24-06 0 January 19, 2024 - - 800 ND ND <td>BH24-05</td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>348</td>	BH24-05			-	-	-								348
BH24-06 2 January 19, 2024 - - 2,160 ND ND </td <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>624</td>				-	-									624
BH24-07 0 January 19, 2024 - - 920 ND ND <td>BH24-06</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>715</td>	BH24-06				-									715
BH24-07 2 January 19, 2024 - - 1,520 ND ND </td <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>920</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>449</td>				-	-	920	ND	ND	ND	ND	ND	ND	ND	449
BH24-08 0 January 19, 2024 - - 480 ND ND ND 285 ND 285 285 BH24-08 2 January 19, 2024 - - 2,520 ND ND <td>BH24-07</td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>265</td>	BH24-07			-	-									265
BH24-08 2 January 19, 2024 - - 2,520 ND ND </td <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td>ND</td> <td>ND</td> <td>ND</td> <td></td> <td>ND</td> <td>285</td> <td></td> <td>ND</td>				-	-		ND	ND	ND		ND	285		ND
BH24-09 0 January 24, 2024 0 370 ND ND <td>BH24-08</td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>11.3</td>	BH24-08			-	-									11.3
BH24-09 0 January 25, 2024 - 0 310 ND ND <td></td> <td></td> <td></td> <td>-</td> <td>0</td> <td>370</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>537</td>				-	0	370	ND	ND	ND	ND	ND	ND	ND	537
BH24-09 1 January 25, 2024 - 0 475 ND ND <td></td> <td></td> <td></td> <td>-</td> <td>0</td> <td></td> <td>ND</td> <td>ND</td> <td>ND</td> <td></td> <td>ND</td> <td>ND</td> <td>ND</td> <td>311</td>				-	0		ND	ND	ND		ND	ND	ND	311
2 January 24, 2024 0 2,160 ND	BH24-09			-										606
BH24-10 0 January 24, 2024 - 0 450 ND ND <td>-</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>821</td>	-			-										821
BH24-10 2 January 24, 2024 - 0 350 ND ND <td></td> <td></td> <td></td> <td>-</td> <td>0</td> <td>450</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>118</td>				-	0	450	ND	ND	ND	ND	ND	ND	ND	118
0 January 24, 2024 0 3,200 ND	BH24-10			-										92
BH24-11 0 January 25, 2024 0 275 ND ND <td></td> <td></td> <td></td> <td>-</td> <td>0</td> <td>3,200</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>624</td>				-	0	3,200	ND	ND	ND	ND	ND	ND	ND	624
BH24-11 1 January 25, 2024 0 420 ND ND ND 80 ND ND 80 2 January 24, 2024 0 2,780 ND	DU24.44			-										413
2 January 24,2024 0 2,780 ND	вн24-11			-										465
0 January 24, 2024 - 0 320 ND	BH24-01 BH24-02 BH24-03 BH24-04 BH24-05 BH24-05 BH24-06 BH24-07 BH24-08 BH24-09 BH24-10 BH24-10 BH24-11 BH24-11 BH24-12 BH24-13 BH24-14	2		-	0	2,780	ND	ND	ND	ND	ND	ND	ND	624
BH24-12 0 January 25, 2024 0 360 ND ND <td></td> <td></td> <td></td> <td>-</td> <td>0</td> <td>320</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>-</td>				-	0	320	ND	ND	ND	ND	ND	ND	ND	-
BH24-12 1 January 25, 2024 0 512 ND ND <td></td> <td>0</td> <td></td> <td>-</td> <td>0</td> <td>360</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>427</td>		0		-	0	360	ND	ND	ND	ND	ND	ND	ND	427
2 January 24, 2024 - 0 2,300 ND	BH24-12	1		-	0	512	ND	ND	ND	ND	ND	ND	ND	435
0 January 25, 2024 - 22 310 ND	-			-	0	2,300	ND	ND	ND		ND	ND	ND	613
BH24-13 1 January 25, 2024 - - 450 ND ND <td></td> <td>0</td> <td></td> <td>-</td> <td>22</td> <td>310</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>DN</td> <td>347</td>		0		-	22	310	ND	ND	ND	ND	ND	ND	DN	347
2 January 25, 2024 - - 2,520 ND	BH24-13	1		-	-	450	ND	ND	ND	ND	ND	ND	ND	439
BH24-14 0 January 25, 2024 - 32 305 ND ND <td>-</td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>812</td>	-			-	-									812
BH24-14 1 January 25, 2024 - 282 ND ND <td></td> <td></td> <td></td> <td>-</td> <td>32</td> <td>305</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>ND</td> <td>531</td>				-	32	305	ND	ND	ND	ND	ND	ND	ND	531
BH24-15 0 January 25, 2024 - 15 202 ND ND ND ND ND ND ND ND	вн24-14	1		-	-	282	ND	ND	ND	ND	ND	ND	ND	153
BR24-15	DU124.45	0		-	15	202	ND	ND	ND	ND	ND	ND	ND	319
1 January 25, 2024 - 0 180 ND	BH24-15	1	January 25, 2024	-	0	180	ND	ND	ND	ND	ND	ND	ND	150
0 January 26 2024 - 52 188 ND ND ND ND ND ND ND ND ND	DU24.10			-	52	188	ND	ND	ND	ND	ND	ND	ND	141
BH24-16 1 January 26, 2024 - 7 310 ND ND ND ND ND ND ND ND	BH24-16			-										153



.

	Table	e 2. Initial Characteri	zation Sa	mple Field	Screen ar	nd Laborat	ory Resul	ts - Depth	to Groun	dwater <5	0 feet bgs		
	Sample Desci	ription	Field Screening			Petroleum Hydrocarbons							
			ds			Volatile				Extractable	5		Inorganic
Sample ID	Depth (ft)	Sample Date	Volatile Organic Compounds (PID)	Extractable Organic Compounds (PetroFlag)	Chloride Concentration	Benzene	BTEX (Total)	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics ((MRO)	(GRO + DRO)	Total Petroleum Hydrocarbons (TPH)	Chloride Concentration
			(ppm)	(ppm)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	0	January 30, 2024	-	25	820	ND	ND	ND	ND	ND	ND	ND	132
BH24-17	2	January 30, 2024	-	10	1,300	ND	ND	ND	ND	ND	ND	ND	82.3
	3	January 30, 2024	-	0	1,500	ND	ND	ND	ND	ND	ND	ND	77.4
	0	January 30, 2024	-	32	520	ND	ND	ND	ND	ND	ND	ND	255
BH24-18	2	January 30, 2024	-	0	1,010	ND	ND	ND	ND	ND	ND	ND	706
	4	January 30, 2024	-	5	1,200	ND	ND	ND	ND	ND	ND	ND	499
BH24-19	0	February 21, 2024	0	45	380	-	-	-	-	-	-	-	-
BH24-19	1	February 21, 2024	0	30	240	ND	ND	ND	ND	ND	ND	ND	112
BU124-20	0	February 21, 2024	0	80	575	ND	ND	ND	ND	ND	ND	ND	496
BH24-20	2	February 21, 2024	0	42	267	ND	ND	ND	ND	ND	ND	ND	80
BU24.24	0	February 21, 2024	0	97	327	ND	ND	ND	ND	ND	ND	ND	368
BH24-21	2	February 21, 2024	0	78	255	ND	ND	ND	ND	ND	ND	ND	96

"ND" Not Detected at the Reporting Limit

"-" indicates not analyzed/assessed

Bold and grey shaded indicates exceedance outside of NMOCD Remediation Closure Criteria



.

Attachment 5

Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/2/2024 11:58:56 AM

JOB DESCRIPTION

JRU DI 1A CTB 23E-04616

JOB NUMBER

890-6016-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notos and contact information.



Page 1 of 43

Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/2/2024 11:58:56 AM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

SDG: 23E-04616

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QC Association Summary	26
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Certification Summary	35
Method Summary	36
Sample Summary	37
Chain of Custody	38
Receipt Checklists	42

	Definitions/Glossary		326
Client: Vertex	Demitions/Giossaly	Job ID: 890-6016-1	
Project/Site: JR	U DI 1A CTB	SDG: 23E-04616	
Qualifiers			-
GC VOA Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA	Qualifier Description		
Qualifier	Qualifier Description		
S1+ U	Surrogate recovery exceeds control limits, high biased.		Ī
	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL	Method Quantitation Limit		
NC	Not Calculated		
ND	Not Detected at the reporting limit (or MDL or EDL if shown)		
NEG	Negative / Absent		
POS	Positive / Present		
PQL	Practical Quantitation Limit		
PRES	Presumptive		
QC	Quality Control		
RER	Relative Error Ratio (Radiochemistry)		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RPD	Relative Percent Difference, a measure of the relative difference between two points		

- RPD Relative Percent Difference, a measure of the relative difference between two points
- TEF Toxicity Equivalent Factor (Dioxin)
- TEQ Toxicity Equivalent Quotient (Dioxin)
- TNTC Too Numerous To Count

Case Narrative

Job ID: 890-6016-1

Client: Vertex Project: JRU DI 1A CTB

Job ID: 890-6016-1

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Job Narrative 890-6016-1

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Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/23/2024 8:23 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH24-01 (890-6016-1), BH24-01 (890-6016-2), BH24-02 (890-6016-3), BH24-02 (890-6016-4), BH24-03 (890-6016-5), BH24-03 (890-6016-6), BH24-04 (890-6016-7), BH24-04 (890-6016-8), BH24-05 (890-6016-9), BH24-05 (890-6016-10), BH24-06 (890-6016-11), BH24-06 (890-6016-12), BH24-07 (890-6016-13), BH24-07 (890-6016-14), BH24-08 (890-6016-15) and BH24-08 (890-6016-16).

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-71831 and analytical batch 880-72133 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH24-07 (890-6016-13), BH24-07 (890-6016-14), (CCV 880-72133/20) and (890-6016-A-1-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-71893 and analytical batch 880-71993 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH24-01 (890-6016-2), BH24-02 (890-6016-4) and (890-6039-A-1-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71588 and analytical batch 880-71742 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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Job ID: 890-6016-1 SDG: 23E-04616

Client Sample ID: BH24-01

Date Collected: 01/19/24 10:25 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Client: Vertex

Lab Sample ID: 890-6016-1

Matrix: Solid

ate Collected: 01/19/24 10:25							Matri	ix: Solid
Date Received: 01/23/24 08:23 Sample Depth: 0								
-								
Method: SW846 8021B - Volatile			·	• 1 14	_	D	• k	
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199		0.00199	mg/Kg		01/29/24 13:41	02/01/24 15:17	1
Toluene	< 0.00199		0.00199	mg/Kg		01/29/24 13:41	02/01/24 15:17	1
Ethylbenzene	< 0.00199		0.00199	mg/Kg		01/29/24 13:41	02/01/24 15:17	1
m-Xylene & p-Xylene	<0.00398		0.00398	mg/Kg		01/29/24 13:41	02/01/24 15:17	1
o-Xylene	<0.00199		0.00199	mg/Kg		01/29/24 13:41	02/01/24 15:17	1
Xylenes, Total	<0.00398	U F2 F1	0.00398	mg/Kg		01/29/24 13:41	02/01/24 15:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130			01/29/24 13:41	02/01/24 15:17	1
1,4-Difluorobenzene (Surr)	80		70 - 130			01/29/24 13:41	02/01/24 15:17	1
- Method: TAL SOP Total BTEX - T	Total BTEX Cal	culation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398		0.00398	mg/Kg		·	02/01/24 15:17	1
-				- · ·				
Method: SW846 8015 NM - Diese	ان Range Organ	lics (DRO) ([/]	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1250		50.4	mg/Kg			01/31/24 22:30	1
- Method: SW846 8015B NM - Dies	col Pange Org:	onice (DRO)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics			50.4	0mt mg/Kg	— -	01/29/24 17:13	01/31/24 22:30	1
(GRO)-C6-C10	~~	0	00.1			01/20/21 11.10	01/01/21 22:00	
Diesel Range Organics (Over	1250		50.4	mg/Kg		01/29/24 17:13	01/31/24 22:30	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/29/24 17:13	01/31/24 22:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	123		70 - 130			01/29/24 17:13	01/31/24 22:30	1
o-Terphenyl	96		70 - 130			01/29/24 17:13	01/31/24 22:30	1
Method: EPA 300.0 - Anions, Ion								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1300		49.7	mg/Kg			01/29/24 04:19	10

Client Sample ID: BH24-01 Date Collected: 01/19/24 10:30 Date Received: 01/23/24 08:23

Sample Depth: 2

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 15:43	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 15:43	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 15:43	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/29/24 13:41	02/01/24 15:43	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 15:43	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/29/24 13:41	02/01/24 15:43	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130			01/29/24 13:41	02/01/24 15:43	1

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Lab Sample ID: 890-6016-2

Matrix: Solid

Dil Fac

Dil Fac

Dil Fac

Dil Fac

1

Matrix: Solid

Client Sample Results

Limits

70 - 130

RL

RL

50.1

RL

50.1

50.1

0.00399

Unit

Unit

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Job ID: 890-6016-1 SDG: 23E-04616

Client Sample ID: BH24-01

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

Method: TAL SOP Total BTEX - Total BTEX Calculation

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

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

%Recovery Qualifier

Result Qualifier

Ū

Result Qualifier

Result Qualifier

<50.1 U

<50.1 U

<50.1 U

96

< 0.00399

Date Collected: 01/19/24 10:30 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 2

1,4-Difluorobenzene (Surr)

Gasoline Range Organics

Diesel Range Organics (Over

Client: Vertex

Surrogate

Analyte

Analyte

Analyte

C10-C28)

(GRO)-C6-C10

Total TPH

Total BTEX

Lab Sample ID: 890-6016-2 Matrix: Solid

Analyzed

02/01/24 15:43

Analyzed

02/01/24 15:43

Analyzed

01/31/24 22:51

Analyzed

01/31/24 22:51

01/31/24 22:51

Lab Sample ID: 890-6016-3

Prepared

01/29/24 13:41

Prepared

Prepared

Prepared

01/29/24 17:13

01/29/24 17:13

D

D

D

5

	3

C10-C28) Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg	01/29/24 17:13	01/31/24 22:51	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1-Chlorooctane	135	S1+	70 - 130		01/29/24 17:13	01/31/24 22:51	1
o-Terphenyl	107		70 - 130		01/29/24 17:13	01/31/24 22:51	1

lethod: EPA 300.0 - Anions, Ion Chromatography - Soluble							
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	303	4.95	mg/Kg			01/29/24 04:40	1

Client Sample ID: BH24-02

Date Collected: 01/19/24 10:35 Date Received: 01/23/24 08:23 Sample Depth: 0

Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fac Benzene <0.00200 U 0.00200 mg/Kg 01/29/24 13:41 02/01/24 16:09 Toluene <0.00200 U 0.00200 01/29/24 13:41 02/01/24 16:09 mg/Kg 1 Ethylbenzene <0.00200 U 0.00200 mg/Kg 01/29/24 13:41 02/01/24 16:09 <0.00401 U 0.00401 01/29/24 13:41 02/01/24 16:09 m-Xylene & p-Xylene mg/Kg 1 o-Xylene <0.00200 U 0.00200 mg/Kg 01/29/24 13:41 02/01/24 16:09 Xylenes, Total <0.00401 U 0.00401 mg/Kg 01/29/24 13:41 02/01/24 16:09 1 %Recovery Qualifier Limits Dil Fac Surrogate Prepared Analvzed 70 - 130 01/29/24 13:41 4-Bromofluorobenzene (Surr) 126 02/01/24 16:09 1 1,4-Difluorobenzene (Surr) 126 70 - 130 01/29/24 13:41 02/01/24 16:09 1 Method: TAL SOP Total BTEX - Total BTEX Calculation Analvte Result Qualifier RL D Dil Fac Unit Prepared Analyzed Total BTEX <0.00401 Ū 0.00401 02/01/24 16:09 mg/Kg Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Dil Fac Analyte Result Qualifier RL Unit D Prepared Analyzed **Total TPH** 49.9 mg/Kg 01/31/24 23:12 55.4 1

Eurofins Carlsbad
Job ID: 890-6016-1 SDG: 23E-04616

Matrix: Solid

Lab Sample ID: 890-6016-3

Client Sample ID: BH24-02

Date Collected:	01/19/24 10:35
Date Received:	01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 0

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics	<49.9	U	49.9	mg/Kg		01/29/24 17:13	01/31/24 23:12	
(GRO)-C6-C10								
Diesel Range Organics (Over	55.4		49.9	mg/Kg		01/29/24 17:13	01/31/24 23:12	
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/29/24 17:13	01/31/24 23:12	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1-Chlorooctane	107		70 - 130			01/29/24 17:13	01/31/24 23:12	
o-Terphenyl	85		70 - 130			01/29/24 17:13	01/31/24 23:12	

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	598	4.97	mg/Kg			01/29/24 04:47	1

Client Sample ID: BH24-02

Date Collected: 01/19/24 10:45

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 16:35	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 16:35	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 16:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 16:35	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 16:35	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 16:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			01/29/24 13:41	02/01/24 16:35	1
1,4-Difluorobenzene (Surr)	101		70 - 130			01/29/24 13:41	02/01/24 16:35	1

Total BTEX <0.00398</th> U 0.00398 mg/Kg

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			01/31/24 23:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<49.6	U	49.6	mg/Kg		01/29/24 17:13	01/31/24 23:32	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<49.6	U	49.6	mg/Kg		01/29/24 17:13	01/31/24 23:32	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/29/24 17:13	01/31/24 23:32	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	133	S1+	70 - 130			01/29/24 17:13	01/31/24 23:32	1
o-Terphenyl	111		70 - 130			01/29/24 17:13	01/31/24 23:32	1

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02/01/24 16:35

Date Received: 01/23/24 08:23

		Client	Sample Re	sults				
Client: Vertex							Job ID: 890	-6016-1
Project/Site: JRU DI 1A CTB							SDG: 23	E-04616
Client Sample ID: BH24-02						Lab Sar	nple ID: 890-	6016-4
Date Collected: 01/19/24 10:45							Matri	x: Solid
Date Received: 01/23/24 08:23								
Sample Depth: 2								
_								
Method: EPA 300.0 - Anions, Ior Analyte	· · ·	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	786		5.00	mg/Kg			01/29/24 04:54	1
- Client Semple ID: BH24.02						Lah San		6046 E
Client Sample ID: BH24-03						Lap Sar	nple ID: 890-	
Date Collected: 01/19/24 10:47							Matri	x: Solid
Date Received: 01/23/24 08:23								
Sample Depth: 0								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00198	U	0.00198	mg/Kg		01/29/24 13:41	02/01/24 17:01	1
Toluene	<0.00198	U	0.00198	mg/Kg		01/29/24 13:41	02/01/24 17:01	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		01/29/24 13:41	02/01/24 17:01	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		01/29/24 13:41	02/01/24 17:01	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/29/24 13:41	02/01/24 17:01	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		01/29/24 13:41	02/01/24 17:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/29/24 13:41	02/01/24 17:01	1
1,4-Difluorobenzene (Surr)	104		70 - 130			01/29/24 13:41	02/01/24 17:01	1
_ Method: TAL SOP Total BTEX - ⁻	Total BTEX Cal	culation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396		0.00396	mg/Kg			02/01/24 17:01	1
_				0.0				
Method: SW846 8015 NM - Diese				11-34	-	Description	A	D!!
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	0	50.3	mg/Kg			01/31/24 23:53	1
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3	mg/Kg		01/29/24 17:13	01/31/24 23:53	1
Diesel Range Organics (Over	<50.3	U	50.3	mg/Kg		01/29/24 17:13	01/31/24 23:53	1
C10-C28)				5.5				
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		01/29/24 17:13	01/31/24 23:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130			01/29/24 17:13	01/31/24 23:53	1
o-Terphenyl	87		70 - 130			01/29/24 17:13	01/31/24 23:53	1
	Chromotogra							
Method: EPA 300.0 - Anions, Ior Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

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

Method: TAL SOP Total BTEX - Total BTEX Calculation

Result Qualifier

Qualifier

<0.00199 U

<0.00199 U

<0.00199 U

<0.00398 U

<0.00199 U

<0.00398 U

124

84

Result Qualifier

%Recovery

RL

0.00199

0.00199

0.00199

0.00398

0.00199

0.00398

Limits

70 - 130

70 - 130

RL

Job ID: 890-6016-1 SDG: 23E-04616

Client Sample ID: BH24-03

Date Collected: 01/19/24 10:50 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 2

Client: Vertex

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Analyte

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Lab Sample ID: 890-6016-6 Matrix: Solid

Analyzed

02/01/24 17:27

02/01/24 17:27

02/01/24 17:27

02/01/24 17:27

02/01/24 17:27

02/01/24 17:27

Analyzed

02/01/24 17:27

02/01/24 17:27

Analyzed

Prepared

01/29/24 13:41

01/29/24 13:41

01/29/24 13:41

01/29/24 13:41

01/29/24 13:41

01/29/24 13:41

Prepared

01/29/24 13:41

01/29/24 13:41

Prepared

D

D

5

Dil Fac

1

1

1

1

1

Dil Fac

Dil Fac

Total BTEX	<0.00398	U	0.00398	mg/Kg			02/01/24 17:27	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.2	U	50.2	mg/Kg			02/01/24 00:14	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.2	U	50.2	mg/Kg		01/29/24 17:13	02/01/24 00:14	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.2	U	50.2	mg/Kg		01/29/24 17:13	02/01/24 00:14	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/29/24 17:13	02/01/24 00:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane			70 - 130			01/29/24 17:13	02/01/24 00:14	1
o-Terphenyl	88		70 - 130			01/29/24 17:13	02/01/24 00:14	1

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Unit

o-Terphenyl	88	70 - 130			01/29/24 17:13	02/01/24 00:14	1
Method: EPA 300.0 - Anions, Ion C Analyte	hromatography - Solut Result Qualifier	ole RL	Unit	D	Prepared	Analvzed	Dil Fac
Analyte	Result Qualifier		Unit	U	Flepaleu	Allalyzeu	Dirrac
Chloride	431	4.99	mg/Kg			01/29/24 05:07	1

Client Sample ID: BH24-04 Date Collected: 01/19/24 11:00 Date Received: 01/23/24 08:23

Sample Depth: 0

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 17:53	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 17:53	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 17:53	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		01/29/24 13:41	02/01/24 17:53	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 17:53	1
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		01/29/24 13:41	02/01/24 17:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	130		70 - 130			01/29/24 13:41	02/01/24 17:53	1

Eurofins Carlsbad

Lab Sample ID: 890-6016-7

Matrix: Solid

Released to Imaging: 5/10/2024 11:00:40 AM

Client Sample Results

Job ID: 890-6016-1

01/29/24 17:13

01/29/24 13:41

01/29/24 13:41

02/01/24 00:55

Lab Sample ID: 890-6016-8

02/01/24 18:19

02/01/24 18:19

Client Sample ID: BH24-04

Date Collected: 01/19/24 11:00 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 0

Client: Vertex

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

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	116		70 - 130			01/29/24 13:41	02/01/24 17:53	1
Method: TAL SOP Total BTEX - 1	otal BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/01/24 17:53	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			02/01/24 00:55	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	• •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics								Diriac
Gasoline Manye Organius	<50.4	U	50.4	mg/Kg		01/29/24 17:13	02/01/24 00:55	1
(GRO)-C6-C10	<50.4	U	50.4	mg/Kg		01/29/24 17:13	02/01/24 00:55	1
(GRO)-C6-C10	<50.4 <50.4		50.4 50.4	mg/Kg mg/Kg		01/29/24 17:13	02/01/24 00:55 02/01/24 00:55	1
(GRO)-C6-C10 Diesel Range Organics (Over				0.0				1
(GRO)-C6-C10 Diesel Range Organics (Over C10-C28)		U		0.0				1 1
0 0	<50.4	U U	50.4	mg/Kg		01/29/24 17:13	02/01/24 00:55	Dil Fac

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12000	101	mg/Kg			01/29/24 05:14	20

70 - 130

Client Sample ID: BH24-04

o-Terphenyl

Analyte

Benzene

Toluene

o-Xylene

Date Collected: 01/19/24 11:10 Date Received: 01/23/24 08:23 Sample Depth: 2

Method: SW846 8021B - Volatile Organic Compounds (GC) Dil Fac Result Qualifier RL Unit D Prepared Analyzed <0.00201 U 0.00201 mg/Kg 01/29/24 13:41 02/01/24 18:19 <0.00201 U 0.00201 01/29/24 13:41 02/01/24 18:19 mg/Kg Ethylbenzene <0.00201 U 0.00201 mg/Kg 01/29/24 13:41 02/01/24 18:19 m-Xylene & p-Xylene <0.00402 U 0.00402 01/29/24 13:41 02/01/24 18:19 mg/Kg <0.00201 U 0.00201 mg/Kg 01/29/24 13:41 02/01/24 18:19 mg/Kg Xylenes, Total <0.00402 U 0.00402 01/29/24 13:41 02/01/24 18:19 Dil Fac Prepared Analyzed

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	88		70 _ 130
1,4-Difluorobenzene (Surr)	81		70 _ 130

96

Method: TAL SOP Total BTEX - Total B	TEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/01/24 18:19	1
 Method: SW846 8015 NM - Diesel Rang	ge Organ	ics (DRO) (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Total TPH	<50.5	U	50.5	mg/Kg			02/01/24 01:16	1	

Eurofins Carlsbad

SDG: 23E-04616 Lab Sample ID: 890-6016-7

Matrix: Solid

5

1

1

1

1

1

1

1

1

1

Matrix: Solid

Job ID: 890-6016-1 SDG: 23E-04616

Matrix: Solid

5

Lab Sample ID: 890-6016-8

Lab Sample ID: 890-6016-9

Matrix: Solid

Client Sample ID: BH24-04

Date Collected: 01/19/24 11:10 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 2

Client: Vertex

_		
Mothod: SW8/	6 8015B NM - Diesel Range Organics (DRO) (G0	
Methou. Swo-	ourse range organics (Dro) (Or	3)
Analuta	Result Qualifier	RL
Analyte	Result Qualifier	RL .

Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<50.5	U	50.5	mg/Kg		01/29/24 17:13	02/01/24 01:16	1
<50.5	U	50.5	mg/Kg		01/29/24 17:13	02/01/24 01:16	1
<50.5	U	50.5	mg/Kg		01/29/24 17:13	02/01/24 01:16	1
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
120		70 - 130			01/29/24 17:13	02/01/24 01:16	1
97		70 - 130			01/29/24 17:13	02/01/24 01:16	1
	<50.5 <50.5 <50.5 %Recovery 120		<50.5	<50.5 U 50.5 mg/Kg <50.5	<50.5 U 50.5 mg/Kg <50.5	<50.5 U 50.5 mg/Kg 01/29/24 17:13 <50.5	<50.5 U 50.5 mg/Kg 01/29/24 17:13 02/01/24 01:16 <50.5

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2120	49.7	mg/Kg			01/29/24 05:21	10

Client Sample ID: BH24-05

Date Collected: 01/19/24 11:20 Date Received: 01/23/24 08:23

Sample Depth: 0

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 18:45	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 18:45	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 18:45	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		01/29/24 13:41	02/01/24 18:45	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 18:45	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		01/29/24 13:41	02/01/24 18:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			01/29/24 13:41	02/01/24 18:45	1
1,4-Difluorobenzene (Surr)	78		70 - 130			01/29/24 13:41	02/01/24 18:45	1
Method: TAL SOP Total BTEX	- Total BTEX Calo	culation						
Method: TAL SOP Total BTEX	- Total BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte		Qualifier	RL 0.00401	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/01/24 18:45	Dil Fac
Analyte Total BTEX	Result <0.00401	Qualifier U	0.00401		D	Prepared		Dil Fac
Analyte Total BTEX Method: SW846 8015 NM - Die	Result <0.00401	Qualifier U	0.00401		<u>D</u> 	Prepared		1
Analyte Total BTEX Method: SW846 8015 NM - Die Analyte	Result <0.00401	Qualifier U ics (DRO) (Qualifier	0.00401	mg/Kg		<u>·</u>	02/01/24 18:45	Dil Fac 1 Dil Fac 1
Analyte Total BTEX Method: SW846 8015 NM - Die Analyte Total TPH	Result <0.00401 sel Range Organ Result <49.8	Qualifier U ics (DRO) (Qualifier U	0.00401 GC) RL 49.8	mg/Kg Unit		<u>·</u>	02/01/24 18:45 Analyzed	1
Analyte Total BTEX Method: SW846 8015 NM - Die Analyte Total TPH Method: SW846 8015B NM - D	esel Range Organ Result <9.00401 Result <49.8 iesel Range Orga	Qualifier U ics (DRO) (Qualifier U	0.00401 GC) RL 49.8	mg/Kg Unit		<u>·</u>	02/01/24 18:45 Analyzed	1
Analyte Total BTEX Method: SW846 8015 NM - Die Analyte Total TPH Method: SW846 8015B NM - D Analyte Gasoline Range Organics	esel Range Organ Result <9.00401 Result <49.8 iesel Range Orga	Qualifier U ics (DRO) (Qualifier U nics (DRO) Qualifier	0.00401 GC) <u>RL</u> 49.8 (GC)	mg/Kg Unit mg/Kg	D	Prepared	02/01/24 18:45 Analyzed 02/01/24 01:36	1 Dil Fac
Method: SW846 8015 NM - Die Analyte	Result Result sel Range Organ Result <49.8 iesel Range Orga Result Result Result	Qualifier U ics (DRO) (Qualifier U mics (DRO) Qualifier U	0.00401 GC) RL 49.8 (GC) RL	mg/Kg Unit mg/Kg Unit	D	Prepared	02/01/24 18:45 Analyzed 02/01/24 01:36 Analyzed	1 Dil Fac

		Clien	it Sample Re	sults				
Client: Vertex							Job ID: 890	-6016-1
Project/Site: JRU DI 1A CTB							SDG: 23	E-04616
Client Sample ID: BH24-05						Lab Sar	nple ID: 890-	6016-9
Date Collected: 01/19/24 11:20							Matri	ix: Solid
Date Received: 01/23/24 08:23								
Sample Depth: 0								
	-							
Method: EPA 300.0 - Anions, Ion Analyte	• •	hy - Solub Qualifier	e RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride		Quanner	250	mg/Kg		riepaieu	01/30/24 08:43	50
Client Sample ID: BH24-05						Lab Sam	ple ID: 890-6	
Date Collected: 01/19/24 11:30							Matri	ix: Solid
Date Received: 01/23/24 08:23								
Sample Depth: 2								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 19:11	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 19:11	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 19:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 19:11	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 19:11	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 19:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		<u> </u>	70 - 130			01/29/24 13:41	02/01/24 19:11	1
1,4-Difluorobenzene (Surr)	110		70 - 130			01/29/24 13:41	02/01/24 19:11	1
_ Method: TAL SOP Total BTEX - T								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398		0.00398				02/01/24 19:11	1
	-0.00000	0	0.00000	mg/rtg			02/01/24 13:11	
Method: SW846 8015 NM - Diese			GC)					
Analyte		Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/01/24 01:57	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/29/24 17:13	02/01/24 01:57	1
(GRO)-C6-C10 Diosol Pango Organics (Over	<50.0		50.0	malka		01/29/24 17:13	02/01/24 01-57	1
Diesel Range Organics (Over C10-C28)	~ 50.0	0	50.0	mg/Kg		01/23/24 17.13	02/01/24 01:57	I
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/29/24 17:13	02/01/24 01:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	103	<u> </u>	70 - 130			01/29/24 17:13	02/01/24 01:57	1
o-Terphenyl	83		70 - 130			01/29/24 17:13	02/01/24 01:57	1
Mothod: EDA 200.0 Anione Jan	Chromotogram	by Colub						
Method: EPA 300.0 - Anions, Ion	unumatograp	ກາງ - ວິບເພນ	C					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

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Job ID: 890-6016-1 SDG: 23E-04616

Client Sample ID: BH24-06

Date Collected: 01/19/24 11:40 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 0

Client: Vertex

Matrix: Solid

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	< 0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 20:55	
oluene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 20:55	
thylbenzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 20:55	
n-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 20:55	
-Xylene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 20:55	
(ylenes, Total	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 20:55	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil F
1-Bromofluorobenzene (Surr)	100		70 - 130			01/29/24 13:41	02/01/24 20:55	
,4-Difluorobenzene (Surr)	78		70 - 130			01/29/24 13:41	02/01/24 20:55	
Method: TAL SOP Total BTEX - T	otal BTEX Calo	ulation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/01/24 20:55	
Aethod: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
otal TPH	<49.7	U	49.7	mg/Kg			02/01/24 02:18	
lethod: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics GRO)-C6-C10	<49.7	U	49.7	mg/Kg		01/29/24 17:13	02/01/24 02:18	
iesel Range Organics (Over :10-C28)	<49.7	U	49.7	mg/Kg		01/29/24 17:13	02/01/24 02:18	
II Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/29/24 17:13	02/01/24 02:18	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
-Chlorooctane	113		70 - 130			01/29/24 17:13	02/01/24 02:18	
-Terphenyl	89		70 - 130			01/29/24 17:13	02/01/24 02:18	
Method: EPA 300.0 - Anions, Ion		-						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	624		4.99	mg/Kg			01/30/24 09:22	
ient Sample ID: BH24-06						Lab Sam	ple ID: 890-6	016-1
te Collected: 01/19/24 11:50							Matri	x: Soli
te Received: 01/23/24 08:23								
mple Depth: 2								
lethod: SW846 8021B - Volatile	Organic Comp	ounds (GC)					
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Senzene	<0.00200	U	0.00200	mg/Kg	-	01/29/24 13:41	02/01/24 21:21	
Foluene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 21:21	
Ethylbenzene	<0.00200		0.00200	mg/Kg		01/29/24 13:41	02/01/24 21:21	

01/29/24 13:41 02/01/24 21:21 Ethylbenzene <0.00200 U 0.00200 mg/Kg <0.00399 U m-Xylene & p-Xylene 0.00399 mg/Kg 01/29/24 13:41 02/01/24 21:21 1 o-Xylene <0.00200 U 0.00200 01/29/24 13:41 02/01/24 21:21 mg/Kg 1 Xylenes, Total <0.00399 U 0.00399 mg/Kg 01/29/24 13:41 02/01/24 21:21 1 %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analyzed 4-Bromofluorobenzene (Surr) 108 70 - 130 01/29/24 13:41 02/01/24 21:21 1

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

2/2/2024

Client Sample Results

Job ID: 890-6016-1 SDG: 23E-04616

Matrix: Solid

5

Lab Sample ID: 890-6016-12

Client Sample ID: BH24-06

Date Collected: 01/19/24 11:50 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 2

Client: Vertex

23/24 08:23			

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	74		70 - 130			01/29/24 13:41	02/01/24 21:21	1
Method: TAL SOP Total BTEX - To	otal BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/01/24 21:21	1
Method: SW846 8015 NM - Diese	Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/01/24 02:38	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/29/24 17:13	02/01/24 02:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/29/24 17:13	02/01/24 02:38	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/29/24 17:13	02/01/24 02:38	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130			01/29/24 17:13	02/01/24 02:38	1
o-Terphenyl	97		70 - 130			01/29/24 17:13	02/01/24 02:38	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	715		4.96	mg/Kg			01/30/24 09:57	1

Date Collected: 01/19/24 12:00 Date Received: 01/23/24 08:23 Sample Depth: 0

Matrix: Solid

Method: SW846 8021B - Volat	ile Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		01/29/24 13:41	02/01/24 21:48	1
Toluene	<0.00201	U	0.00201	mg/Kg		01/29/24 13:41	02/01/24 21:48	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		01/29/24 13:41	02/01/24 21:48	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		01/29/24 13:41	02/01/24 21:48	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		01/29/24 13:41	02/01/24 21:48	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		01/29/24 13:41	02/01/24 21:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146	S1+	70 - 130			01/29/24 13:41	02/01/24 21:48	1
1,4-Difluorobenzene (Surr)	89		70 - 130			01/29/24 13:41	02/01/24 21:48	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/01/24 21:48	1
- Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/01/24 02:59	1

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Job ID: 890-6016-1 SDG: 23E-04616

Matrix: Solid

Dil Fac

1

1

1

1

1

Matrix: Solid

Lab Sample ID: 890-6016-13

Analyzed

02/01/24 02:59

02/01/24 02:59

02/01/24 02:59

Lab Sample ID: 890-6016-14

Client Sample ID: BH24-07

Date Collected: 01/19/24 12:00 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 0

Client: Vertex

 Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)											
Analyte	Result	Qualifier	RL	Unit	D	Prepared					
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		01/29/24 17:13					
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		01/29/24 17:13					
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/29/24 17:13					

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed
1-Chlorooctane	115		70 - 130	01/29/24 17:13	02/01/24 02:59
o-Terphenyl	91		70 - 130	01/29/24 17:13	02/01/24 02:59

Method: EPA 300.0 - Anions. Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	449		5.02	mg/Kg			01/30/24 09:33	1

Client Sample ID: BH24-07

Date Collected: 01/19/24 12:10 Date Received: 01/23/24 08:23

Sample Depth: 2

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 22:14	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 22:14	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 22:14	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 22:14	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 22:14	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 22:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	159	S1+	70 - 130			01/29/24 13:41	02/01/24 22:14	1
1,4-Difluorobenzene (Surr)	98		70 - 130			01/29/24 13:41	02/01/24 22:14	1
Method: TAL SOP Total BTEX - 1 Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/01/24 22:14	1
Total BTEX Method: SW846 8015 NM - Diese Analyte	<0.00398 I Range Organ	U	0.00398		<u>D</u>	Prepared		Dil Fac
Total BTEX Method: SW846 8015 NM - Diese Analyte	<0.00398 I Range Organ	U ics (DRO) (Qualifier	0.00398	mg/Kg		<u>·</u>	02/01/24 22:14	1
Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	<0.00398 Range Organ Result <49.6 sel Range Orga	U ics (DRO) (r Qualifier U unics (DRO)	0.00398 GC) <u>RL</u> 49.6 (GC)	mg/Kg	D	Prepared	02/01/24 22:14 Analyzed 02/01/24 03:20	1 Dil Fac
Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Dies	<0.00398 I Range Organ Result <49.6 sel Range Orga Result	U ics (DRO) (Qualifier U nnics (DRO) Qualifier	0.00398 GC) RL 49.6 (GC) RL	mg/Kg Unit		Prepared	02/01/24 22:14 Analyzed 02/01/24 03:20 Analyzed	Dil Fac
Total BTEX Method: SW846 8015 NM - Diese Analyte Total TPH Method: SW846 8015B NM - Diese Analyte Gasoline Range Organics	<0.00398 Range Organ Result <49.6 sel Range Orga	U ics (DRO) (Qualifier U nnics (DRO) Qualifier	0.00398 GC) <u>RL</u> 49.6 (GC)	mg/Kg	D	Prepared	02/01/24 22:14 Analyzed 02/01/24 03:20	Dil Fa
Total BTEX Method: SW846 8015 NM - Diese	<0.00398 I Range Organ Result <49.6 sel Range Orga Result	U ics (DRO) (Qualifier U mics (DRO) Qualifier U	0.00398 GC) RL 49.6 (GC) RL	mg/Kg Unit mg/Kg Unit	D	Prepared	02/01/24 22:14 Analyzed 02/01/24 03:20 Analyzed	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	113		70 - 130	01/29/24 17:13	02/01/24 03:20	1
o-Terphenyl	89		70 - 130	01/29/24 17:13	02/01/24 03:20	1

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Released to Imaging: 5/10/2024 11:00:40 AM

		Clier	nt Sample Re	sults				
Client: Vertex							Job ID: 890	-6016-1
Project/Site: JRU DI 1A CTB							SDG: 23	E-04616
Client Sample ID: BH24-07						Lab Sam	ple ID: 890-6	016-14
Date Collected: 01/19/24 12:10							-	ix: Solid
Date Received: 01/23/24 08:23							Math	
Sample Depth: 2								
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solub	le					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	265		4.97	mg/Kg			01/30/24 10:13	1
Client Sample ID: BH24-08						Lab Sam	ple ID: 890-6	016-15
Date Collected: 01/19/24 12:20								ix: Solid
Date Received: 01/23/24 08:23							Math	
Sample Depth: 0								
Method: SW846 8021B - Volatile 0								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198		0.00198	mg/Kg		01/29/24 13:41	02/01/24 22:40	1
Toluene	<0.00198		0.00198	mg/Kg		01/29/24 13:41	02/01/24 22:40	1
Ethylbenzene	<0.00198		0.00198	mg/Kg		01/29/24 13:41	02/01/24 22:40	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		01/29/24 13:41	02/01/24 22:40	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		01/29/24 13:41	02/01/24 22:40	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		01/29/24 13:41	02/01/24 22:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130			01/29/24 13:41	02/01/24 22:40	1
1,4-Difluorobenzene (Surr)	110		70 - 130			01/29/24 13:41	02/01/24 22:40	1
Method: TAL SOP Total BTEX - To	otal BTEX Cal	culation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00396	U	0.00396	mg/Kg			02/01/24 22:40	1
				0.0				
Method: SW846 8015 NM - Diesel								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	285		50.1	mg/Kg			02/01/24 03:41	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.1		50.1	mg/Kg		01/29/24 17:13	02/01/24 03:41	1
(GRO)-C6-C10				5.5				
Diesel Range Organics (Over	285		50.1	mg/Kg		01/29/24 17:13	02/01/24 03:41	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		01/29/24 17:13	02/01/24 03:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	119		70 - 130			01/29/24 17:13	02/01/24 03:41	1
o-Terphenyl	94		70 - 130			01/29/24 17:13	02/01/24 03:41	1
	Ohannastaan	hu osti						
Method: EPA 300.0 - Anions, Ion Analyte		hy - Solub Qualifier	le RL	Unit	D	Prepared	Analyzed	Dil Fac
					Ľ	riepaieu		

AnalyteResultQualifierRLUnitDPreparedAnalyzedDChloride<4.98</td>U4.98mg/Kg01/30/24 10:20

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Job ID: 890-6016-1 SDG: 23E-04616

Client Sample ID: BH24-08

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

Date Collected: 01/19/24 12:30 Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Sample Depth: 2

Client: Vertex

Lab Sample ID: 890-6016-16

Matrix: Solid

5 Dil Fac

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 23:06	1
Toluene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 23:06	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 23:06	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 23:06	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		01/29/24 13:41	02/01/24 23:06	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		01/29/24 13:41	02/01/24 23:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	127		70 - 130			01/29/24 13:41	02/01/24 23:06	1
1,4-Difluorobenzene (Surr)	77		70 - 130			01/29/24 13:41	02/01/24 23:06	1
- Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/01/24 23:06	1
_								
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
Method: SW846 8015 NM - Diese Analyte		ics (DRO) (Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
		Qualifier		Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/01/24 04:02	Dil Fac
Analyte Total TPH	Result <50.4	Qualifier U			<u>D</u>	Prepared		
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.4	Qualifier U			D		02/01/24 04:02	
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte	Result <50.4	Qualifier U Inics (DRO) Qualifier	RL 50.4	mg/Kg Unit		Prepared Prepared 01/29/24 17:13		1
Analyte Total TPH Method: SW846 8015B NM - Dies	Result <50.4 sel Range Orga Result	Qualifier U Inics (DRO) Qualifier	RL 50.4 (GC) RL	mg/Kg		Prepared	02/01/24 04:02 Analyzed	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result <50.4 sel Range Orga Result	Qualifier U nics (DRO) Qualifier U	RL 50.4 (GC) RL	mg/Kg Unit		Prepared	02/01/24 04:02 Analyzed	1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over	Result Result <	Qualifier U Qualifier Qualifier U U	RL 50.4 (GC) RL 50.4	mg/Kg Unit mg/Kg		Prepared 01/29/24 17:13	02/01/24 04:02 Analyzed 02/01/24 04:02	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28)	Result <50.4 sel Range Orga Result <50.4 <50.4	Qualifier U Qualifier U U U U	RL 50.4 (GC) RL 50.4 50.4	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/29/24 17:13 01/29/24 17:13	02/01/24 04:02 Analyzed 02/01/24 04:02 02/01/24 04:02	1 Dil Fac 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.4 sel Range Orga Result <50.4 <50.4 <50.4	Qualifier U Qualifier U U U U	RL 50.4 (GC) RL 50.4 50.4 50.4 50.4	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/29/24 17:13 01/29/24 17:13 01/29/24 17:13	02/01/24 04:02 Analyzed 02/01/24 04:02 02/01/24 04:02 02/01/24 04:02	1 Dil Fac 1 1 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	Result <50.4	Qualifier U Qualifier U U U U	RL 50.4 (GC) RL 50.4 50.4 50.4 Limits	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/29/24 17:13 01/29/24 17:13 01/29/24 17:13 01/29/24 17:13 Prepared	02/01/24 04:02 Analyzed 02/01/24 04:02 02/01/24 04:02 02/01/24 04:02 Analyzed	1 Dil Fac 1 1 1 1 Dil Fac
Analyte Total TPH Method: SW846 8015B NM - Dies 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 <50.4	Qualifier U Qualifier U U U Qualifier	RL 50.4 (GC) RL 50.4 50.4 50.4 50.4 50.4 70.4 70.130 70.130	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/29/24 17:13 01/29/24 17:13 01/29/24 17:13 Prepared 01/29/24 17:13	02/01/24 04:02 Analyzed 02/01/24 04:02 02/01/24 04:02 02/01/24 04:02 Analyzed 02/01/24 04:02	1 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1
Analyte Total TPH Method: SW846 8015B NM - Dies Analyte Gasoline Range Organics (GRO)-C6-C10 Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	Result <50.4	Qualifier U Qualifier U U U Qualifier	RL 50.4 (GC) RL 50.4 50.4 50.4 50.4 50.4 70.4 70.130 70.130	mg/Kg Unit mg/Kg mg/Kg		Prepared 01/29/24 17:13 01/29/24 17:13 01/29/24 17:13 Prepared 01/29/24 17:13	02/01/24 04:02 Analyzed 02/01/24 04:02 02/01/24 04:02 02/01/24 04:02 Analyzed 02/01/24 04:02	1 Dil Fac 1 1 1 1 <i>Dil Fac</i> 1

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Client: Vertex Project/Site: JRU DI 1A CTB

Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-6016-1	BH24-01	116	80
890-6016-1 MS	BH24-01	106	97
890-6016-1 MSD	BH24-01	136 S1+	120
890-6016-2	BH24-01	109	96
890-6016-3	BH24-02	126	126
890-6016-4	BH24-02	129	101
890-6016-5	BH24-03	124	104
890-6016-6	BH24-03	124	84
890-6016-7	BH24-04	130	116
890-6016-8	BH24-04	88	81
890-6016-9	BH24-05	118	78
890-6016-10	BH24-05	117	110
890-6016-11	BH24-06	100	78
890-6016-12	BH24-06	108	74
890-6016-13	BH24-07	146 S1+	89
890-6016-14	BH24-07	159 S1+	98
890-6016-15	BH24-08	114	110
890-6016-16	BH24-08	127	77
LCS 880-71831/1-A	Lab Control Sample	85	77
LCSD 880-71831/2-A	Lab Control Sample Dup	87	79
MB 880-71831/5-A	Method Blank	72	122

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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				Percent Surrogate Recovery (Acceptance Limits)
		1CO1	OTPH1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-6016-1	BH24-01	123	96	
890-6016-2	BH24-01	135 S1+	107	
890-6016-3	BH24-02	107	85	
890-6016-4	BH24-02	133 S1+	111	
890-6016-5	BH24-03	110	87	
890-6016-6	BH24-03	110	88	
890-6016-7	BH24-04	120	96	
890-6016-8	BH24-04	120	97	
890-6016-9	BH24-05	115	90	
890-6016-10	BH24-05	103	83	
890-6016-11	BH24-06	113	89	
890-6016-12	BH24-06	121	97	
890-6016-13	BH24-07	115	91	
890-6016-14	BH24-07	113	89	
890-6016-15	BH24-08	119	94	
890-6016-16	BH24-08	120	96	
890-6039-A-1-E MS	Matrix Spike	117	87	
890-6039-A-1-F MSD	Matrix Spike Duplicate	130	93	

Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 890-6016-1

Surrogate Summary

		Ourroga	te oum	ind y	
lient: Vertex				Job ID: 890-6016-1	
roject/Site: JRU DI 1A				SDG: 23E-04616	
	I - Diesel Range Organics	s (DRO) (GC	;) (Contir		
atrix: Solid				Prep Type: Total/NA	
				Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1		
ab Sample ID	Client Sample ID	(70-130)	(70-130)		
CS 880-71893/2-A	Lab Control Sample	96	83	·	
CSD 880-71893/3-A	Lab Control Sample Dup	94	90		
/B 880-71893/1-A	Method Blank	138 S1+	113		
Surrogate Legend					
1CO = 1-Chlorooctane					
OTPH = o-Terphenyl					
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QC Sample Results

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-71831/5-A

Matrix: Solid Analysis Batch: 72133

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 14:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 14:51	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 14:51	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		01/29/24 13:41	02/01/24 14:51	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		01/29/24 13:41	02/01/24 14:51	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		01/29/24 13:41	02/01/24 14:51	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	72		70 - 130			01/29/24 13:41	02/01/24 14:51	1
1,4-Difluorobenzene (Surr)	122		70 - 130			01/29/24 13:41	02/01/24 14:51	1

Lab Sample ID: LCS 880-71831/1-A Matrix: Solid

Analysis Batch: 72133

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08590		mg/Kg		86	70 - 130	
Toluene	0.100	0.08472		mg/Kg		85	70 - 130	
Ethylbenzene	0.100	0.1018		mg/Kg		102	70 - 130	
m-Xylene & p-Xylene	0.200	0.2207		mg/Kg		110	70 - 130	
o-Xylene	0.100	0.1008		mg/Kg		101	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	85		70 - 130
1,4-Difluorobenzene (Surr)	77		70 - 130

Lab Sample ID: LCSD 880-71831/2-A

Matrix: Solid

Analysis Batch: 72133							Prep	Batch:	71831
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08209		mg/Kg		82	70 - 130	5	35
Toluene	0.100	0.08170		mg/Kg		82	70 - 130	4	35
Ethylbenzene	0.100	0.08255		mg/Kg		83	70 - 130	21	35
m-Xylene & p-Xylene	0.200	0.1932		mg/Kg		97	70 - 130	13	35
o-Xylene	0.100	0.09310		mg/Kg		93	70 - 130	8	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-6016-1 MS Matrix: Solid

Analysia Potoby 72122

Analysis Batch: 72133									Prep	Batch: 71831
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00199	U	0.0996	0.08553		mg/Kg		86	70 - 130	
Toluene	<0.00199	U	0.0996	0.08395		mg/Kg		84	70 - 130	

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Client Sample ID: BH24-01

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

QC Sample Results

Client: Vertex Project/Site: JRU DI 1A CTB

Analysis Batch: 72133

4-Bromofluorobenzene (Surr)

Analysis Batch: 72133

Lab Sample ID: 890-6016-1 MSD

1,4-Difluorobenzene (Surr)

Matrix: Solid

Analyte

o-Xylene

Surrogate

Matrix: Solid

Analyte Benzene

Toluene

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Ethylbenzene

m-Xylene & p-Xylene

Lab Sample ID: 890-6016-1 MS

Method: 8021B - Volatile Organic Compounds

Sample Sample

MS MS

%Recovery Qualifier

106

97

Sample Sample Result Qualifier

<0.00199 U

<0.00199 U

<0.00398 U

<0.00199 UF1

<0.00199 U F2 F1 MSD MSD

%Recovery Qualifier 136 S1+

120

<0.00199 UF1

<0.00398 U <0.00199 U F2 F1

Result Qualifier

Job ID: 890-6016-1 SDG: 23E-04616

		ient Sample	CI					
	be: Total							
	atch: 71							
		%Rec				MS	MS	Spike
		Limits	%Rec	D	Unit	Qualifier	Result	Added
-		70 - 130	69		mg/Kg	F1	0.06838	0.0996
		70 - 130	71		mg/Kg		0.1418	0.199
		70 - 130	11		mg/Kg	F1	0.01126	0.0996
								Limits
								70 - 130
								0 - 130
		ient Sample	CI					
	be: Total							
١		Prep T						
١	be: Total atch: 71	Prep T				MSD	MSD	Spike
	be: Total atch: 71	Prep T Prep	%Rec	D	Unit	MSD Qualifier		Spike Added
	be: Total atch: 71	Prep T Prep %Rec	%Rec	<u>D</u>	Unit mg/Kg			
	atch: 71	Prep T Prep %Rec Limits		<u>D</u>			Result	Added
t	e: Total atch: 71 RPD 2	Prep T Prep %Rec Limits 70 - 130	84	<u>D</u>	mg/Kg		Result 0.08356	Added
t 5	RPD 2	Prep T Prep %Rec Limits 70 - 130 70 - 130	84 86	<u> </u>	mg/Kg mg/Kg		Result 0.08356 0.08553	Added
t 5 5 5	RPD L 2 2 2	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130	84 86 71	<u>D</u>	mg/Kg mg/Kg mg/Kg	Qualifier	Result 0.08356 0.08553 0.06985	Added 0.0990 0.0990 0.0990 0.198
t 5 5 5 5	RPD L 2 2 6	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	84 86 71 76	<u>D</u>	mg/Kg mg/Kg mg/Kg mg/Kg	Qualifier	Result 0.08356 0.08553 0.06985 0.1506	Added 0.0990 0.0990 0.0990
t 5 5 5 5	RPD L 2 2 6	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	84 86 71 76	<u> </u>	mg/Kg mg/Kg mg/Kg mg/Kg	Qualifier	Result 0.08356 0.08553 0.06985 0.1506	Added 0.0990 0.0990 0.0990 0.198 0.0990 Limits
t 5 5 5	RPD L 2 2 6	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130	84 86 71 76	<u>D</u>	mg/Kg mg/Kg mg/Kg mg/Kg	Qualifier	Result 0.08356 0.08553 0.06985 0.1506	Added 0.0990 0.0990 0.0990 0.198 0.0990

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

Lab Sample ID: MB 880-71893/1-A
Matrix: Solid
Analysis Batch: 71993

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/29/24 17:13	01/31/24 19:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/29/24 17:13	01/31/24 19:25	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/29/24 17:13	01/31/24 19:25	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	138	S1+	70 - 130			01/29/24 17:13	01/31/24 19:25	1

70 - 130

1-Chlorooctane	138	S1+
o-Terphenyl	113	
-		

Lab Sample ID: LCS 880-71893/2-A Matrix: Solid alvaia Datak 74000

Analysis Batch: 71993							Prep	o Batch: 71893
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	941.3		mg/Kg		94	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	1001		mg/Kg		100	70 - 130	
C10-C28)								

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Prep Type: Total/NA

Client Sample ID: Method Blank

01/29/24 17:13 01/31/24 19:25

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 71893

QC Sample Results

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

Method: 8015B NM - Die	ser Kange O	games (L		Sommue	;u)						
Lab Sample ID: LCS 880-71	893/2-A						Client	Sample	ID: Lab Co		
Matrix: Solid										Type: To	
Analysis Batch: 71993									Prep	Batch:	71893
	LCS	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	<u></u>		70 - 130								
o-Terphenyl	83		70 - 130								
Lab Sample ID: LCSD 880-7	71893/3-A					Clier	nt Sam	ple ID:	Lab Contro	I Sampl	e Dup
Matrix: Solid									Prep 1	Type: To	tal/NA
Analysis Batch: 71993									Prep	Batch:	71893
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics			1000	840.8		mg/Kg		84	70 - 130	11	20
(GRO)-C6-C10											
Diesel Range Organics (Over			1000	892.3		mg/Kg		89	70 - 130	11	20
C10-C28)											
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	94		70 - 130								
o-Terphenyl	90		70 - 130								
Analysis Batch: 71993	Sample	Sample	Spike	MS					Prep %Rec	Batch:	71893
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	1010	944.4		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.3	U	1010	1062		mg/Kg		103	70 - 130		
	MS	MS									
Surrogate	%Recovery		Limits								
1-Chlorooctane		Quanner	70 - 130								
o-Terphenyl	87		70 - 130								
	07		101100								
Lab Sample ID: 890-6039-A	-1-F MSD					CI	ient Sa	ample IC): Matrix Sp	oike Dup	olicate
Matrix: Solid								•		ype: To	
Analysis Batch: 71993										Batch:	
	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	<50.3	U	1010	942.9		mg/Kg		91	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	<50.3	U	1010	1160		mg/Kg		113	70 - 130	9	20
	MSD	MSD									
Surrogate	%Recovery		Limits								
1-Chlorooctane			70 - 130								
	,00										

5

7

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o-Terphenyl

70 - 130

Client: Vertex

Project/Site: JRU DI 1A CTB

QC Sample Results

Job ID: 890-6016-1 SDG: 23E-04616

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71577/1	I -A									Client S	ample ID:		
Matrix: Solid											Prep	Type: S	Soluble
Analysis Batch: 71737													
		MB MB											
Analyte		sult Qualifier		RL		Unit		D	Pr	repared	Analyz		Dil Fa
Chloride	<5	.00 U		5.00		mg/Kg					01/29/24	01:55	
Lab Sample ID: LCS 880-71577/	′2-∆							Cli	ient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Solid								•		Campio		Type: S	
Analysis Batch: 71737												.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
· ·····			Spike		LCS	LCS					%Rec		
Analyte			Added	F	Result	Qualifier	Unit		D	%Rec	Limits		
Chloride			250		273.5		mg/Kg			109	90 - 110		
Lab Sample ID: LCSD 880-7157	7/3-A						Cli	ent S	Sam	ple ID: I	ab Contro	-	
Matrix: Solid											Prep	Type: S	solubl
Analysis Batch: 71737			0 "		1000	1.000					0/ 🗖		
Analyta			Spike			LCSD	l la it		-	0/ D	%Rec	DDC	RP
Analyte			Added			Qualifier			<u>D</u>	%Rec _	Limits 90 - 110		Lim
			250		272.7		mg/Kg			109	90 - 110	0	2
Lab Sample ID: 890-6008-A-2-B	MS									Client	Sample ID	: Matrix	Spik
Matrix: Solid												Type: S	
Analysis Batch: 71737													
-	Sample S	Sample	Spike		MS	MS					%Rec		
A	Result (Qualifier	Added	F	Result	Qualifier	Unit		D	%Rec	Limits		
Analyte	Result	quannor	Audeu	-									
Analyte	328		251		577.2		mg/Kg			100	90 - 110		
Chloride	328				577.2				_				
Chloride Lab Sample ID: 890-6008-A-2-C	328				577.2			Clien	nt Sa		: Matrix Sp		-
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid	328	<u></u>			577.2			Clien	nt Sa		: Matrix Sp	oike Du Type: S	-
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid	328 MSD		251			MSD		Clien	nt Sa): Matrix Sp Prep		Solubl
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737	328 MSD Sample	Sample	251 Spike		MSD	MSD		Clien		Imple ID	: Matrix Sp Prep %Rec	Type: S	Solubl RP
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte	328 MSD Sample S Result	Sample	251 Spike Added	F	MSD Result	MSD Qualifier	Unit	Clien	nt Sa	mple ID	9: Matrix Sp Prep %Rec Limits	Type: S	RP Lim
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737	328 MSD Sample	Sample	251 Spike	F	MSD			Clien		Imple ID	: Matrix Sp Prep %Rec	Type: S	RPI Lim
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride	328 MSD Sample Result 328	Sample	251 Spike Added	F	MSD Result		Unit	Clien	<u>D</u>	%Rec 100	9: Matrix Sp Prep %Rec Limits	Type: S	RP Lim 2
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1	328 MSD Sample Result 328	Sample	251 Spike Added	F	MSD Result		Unit	Clien	<u>D</u>	%Rec 100	9: Matrix Sp Prep %Rec Limits 90 - 110	Type: S	RP Lim 2 I Blan
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid	328 MSD Sample Result 328	Sample	251 Spike Added	F	MSD Result		Unit	Clien	<u>D</u>	%Rec 100	9: Matrix Sp Prep %Rec Limits 90 - 110	Type: S	RP Lim 2 I Blan
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid	328 MSD Sample 3 Result 0 328	Sample	251 Spike Added	F	MSD Result		Unit	Clien	<u>D</u>	%Rec 100	9: Matrix Sp Prep %Rec Limits 90 - 110	Type: S	RPI Lim 2 I Blan
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742	328 MSD Sample 8 Result 0 328	Sample Qualifier	251 Spike Added	F	MSD Result		Unit	D	<u>D</u>	%Rec 100	9: Matrix Sp Prep %Rec Limits 90 - 110	Type: S <u>RPD</u> 0 Method Type: S	RPI Limi 2 I Blani Soluble
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte	328 MSD Sample 3 Result 0 328	Sample Qualifier	251 Spike Added	F	MSD Result	Qualifier	Unit mg/Kg		<u>D</u>	%Rec 100 Client S	9: Matrix Sp Prep %Rec Limits 90 - 110 Gample ID: Prep	Type: S <u>RPD</u> 0 Method Type: S	RPI Limi 2 I Blani Soluble Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride	328 MSD Sample 9 Result 0 328 I-A Resett 0 328 State 1 328 State 1 328 State 1 328 State 1 328 State 1 328 Sample 9 State 1 328 Sample 9 Sample 9 Sample 9 Sample 9 State 1 328 State 1 State	Sample Qualifier MB MB sult Qualifier	251 Spike Added	RL	MSD Result	Qualifier	Unit mg/Kg	<u>D</u>	D Pr	wind the second	9: Matrix Sp Prep %Rec Limits 90 - 110 Gample ID: Prep 	Type: S <u>RPD</u> 0 Method Type: S red 20:06	RPI Lim 2 I Blan Solubl Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/	328 MSD Sample 9 Result 0 328 I-A Resett 0 328 State 1 328 State 1 328 State 1 328 State 1 328 State 1 328 Sample 9 State 1 328 Sample 9 Sample 9 Sample 9 Sample 9 State 1 328 State 1 State	Sample Qualifier MB MB sult Qualifier	251 Spike Added	RL	MSD Result	Qualifier	Unit mg/Kg	<u>D</u>	D Pr	wind the second	9: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: Prep 	Type: S <u>RPD</u> 0 Method Type: S red 20:06 - ontrol S	RPI Lim 2 I Blan Solubl Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid	328 MSD Sample 9 Result 0 328 I-A Resett 0 328 State 1 328 State 1 328 State 1 328 State 1 328 State 1 328 Sample 9 State 1 328 Sample 9 Sample 9 Sample 9 Sample 9 State 1 328 State 1 State	Sample Qualifier MB MB sult Qualifier	251 Spike Added	RL	MSD Result	Qualifier	Unit mg/Kg	<u>D</u>	D Pr	wind the second	9: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: Prep 	Type: S <u>RPD</u> 0 Method Type: S red 20:06	RPI Lim 2 I Blan Solubl Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte	328 MSD Sample 9 Result 0 328 I-A Resett 0 328 State 1 328 State 1 328 State 1 328 State 1 328 State 1 328 Sample 9 State 1 328 Sample 9 Sample 9 Sample 9 Sample 9 State 1 328 State 1 State	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251	RL	MSD Result 577.7	Qualifier Unit mg/Kg	Unit mg/Kg	<u>D</u>	D Pr	wind the second	9: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: Prep Analyz 01/29/24 : 1D: Lab Co Prep	Type: S <u>RPD</u> 0 Method Type: S red 20:06 - ontrol S	RPI Lim 2 I Blan Solubl Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid Analysis Batch: 71742	328 MSD Sample 9 Result 0 328 I-A Resett 0 328 State 1 328 State 1 328 State 1 328 State 1 328 State 1 328 Sample 9 State 1 328 Sample 9 Sample 9 Sample 9 Sample 9 State 1 328 State 1 State	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251	RL	MSD Result 577.7	Qualifier Unit mg/Kg	Unit mg/Kg	<u>D</u>	D Pr	%Rec 100 Client S repared Sample	9: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: Prep Analyz 01/29/24 ID: Lab Co Prep %Rec	Type: S <u>RPD</u> 0 Method Type: S red 20:06 - control S	RPI Lim 2 I Blan Solubl Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid Analysis Batch: 71742 Analyte Analyte Analyte	328 MSD Sample 9 Result 0 328 I-A Resett 0 328 State 1 328 State 1 328 State 1 328 State 1 328 State 1 328 Sample 9 State 1 328 Sample 9 Sample 9 Sample 9 Sample 9 State 1 328 State 1 State	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251	RL	MSD Result 577.7	Qualifier Unit mg/Kg	Unit mg/Kg	<u>D</u>	D Pr	wind the second	9: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: Prep Analyz 01/29/24 : 1D: Lab Co Prep	Type: S <u>RPD</u> 0 Method Type: S red 20:06 - control S	RPI Limi 2 I Blani Soluble Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid Analysis Batch: 71742 Analyte Analyte Analyte	328 MSD Sample 9 Result 0 328 I-A Resett 0 328 State 1 328 State 1 328 State 1 328 State 1 328 State 1 328 Sample 9 State 1 328 Sample 9 Sample 9 Sample 9 Sample 9 State 1 328 State 1 State	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251 Spike Added	RL	MSD Result 577.7 LCS Result	Qualifier Unit mg/Kg	Unit mg/Kg	<u>D</u>	D Pr	%Rec 100 Client S repared Sample %Rec	9: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: Prep Analyz 01/29/24 1D: Lab Co Prep %Rec Limits	Type: S <u>RPD</u> 0 Method Type: S red 20:06 - control S	RPI Lim 2 I Blan Solubl Dil Fa
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid Analysis Batch: 71742 Analyte Chloride Chloride Chloride	328 MSD Sample 3 Result 0 328 I-A Kes <5 2-A	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251 Spike Added	RL	MSD Result 577.7 LCS Result	Qualifier Unit mg/Kg	Unit mg/Kg	Cli	D Pr ient	%Rec 100 Client S repared Sample %Rec 94	2: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: I Prep Analyz 01/29/24 : 1D: Lab Co Prep %Rec Limits 90 - 110 - ab Contro	Type: S RPD 0 Method Type: S ced 20:06 Type: S Dontrol S Type: S 	Solubi RP Lim 2 I Blan Solubi Dil Fa Sampl Solubi
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCSD 880-71588/ Matrix: Solid	328 MSD Sample 3 Result 0 328 I-A Kes <5 2-A	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251 Spike Added	RL	MSD Result 577.7 LCS Result	Qualifier Unit mg/Kg	Unit mg/Kg	Cli	D Pr ient	%Rec 100 Client S repared Sample %Rec 94	2: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: I Prep Analyz 01/29/24 : 1D: Lab Co Prep %Rec Limits 90 - 110 - ab Contro	Type: S <u>RPD</u> 0 Method Type: S 20:06 Control S Type: S	Solubi RP Lim 2 I Blan Solubi Dil Fa Sampl Solubi
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCSD 880-71588/ Matrix: Solid	328 MSD Sample 3 Result 0 328 I-A Kes <5 2-A	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251 Spike Added	RL	MSD Result 577.7 LCS Result	Qualifier Unit mg/Kg	Unit mg/Kg	Cli	D Pr ient	%Rec 100 Client S repared Sample %Rec 94	2: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: I Prep Analyz 01/29/24 : 1D: Lab Co Prep %Rec Limits 90 - 110 - ab Contro	Type: S RPD 0 Method Type: S ced 20:06 Type: S Dontrol S Type: S 	Soluble RPI Limi 2 I Blanl Soluble Dil Fa Sample Soluble
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid	328 MSD Sample 3 Result 0 328 I-A Kes <5 2-A	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251 Spike Added	RL	MSD Result 577.7 LCS Result 235.9	Qualifier Unit mg/Kg	Unit mg/Kg	Cli	D Pr ient	%Rec 100 Client S repared Sample %Rec 94	2: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: I Prep Analyz 01/29/24 : 1D: Lab Co Prep %Rec Limits 90 - 110 - ab Contro	Type: S RPD 0 Method Type: S ced 20:06 Type: S Dontrol S Type: S 	Coluble RPI Limi 20 I Blank Soluble Dil Factoria Sample Soluble
Chloride Lab Sample ID: 890-6008-A-2-C Matrix: Solid Analysis Batch: 71737 Analyte Chloride Lab Sample ID: MB 880-71588/1 Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCS 880-71588/ Matrix: Solid Analysis Batch: 71742 Analyte Chloride Lab Sample ID: LCSD 880-71588/ Matrix: Solid	328 MSD Sample 3 Result 0 328 I-A Kes <5 2-A	Sample Qualifier MB MB sult Qualifier	251 Spike Added 251 Spike Added 250	RL	MSD Result 577.7 LCS Result 235.9	Qualifier Unit mg/Kg LCS Qualifier	Unit mg/Kg	Cli	D Pr ient	%Rec 100 Client S repared Sample %Rec 94	e: Matrix Sp Prep %Rec Limits 90 - 110 ample ID: Prep Analyz 01/29/24 DI: Lab Co Prep %Rec Limits 90 - 110 - ab Contro Prep	Type: S RPD 0 Method Type: S ced 20:06 Type: S Dontrol S Type: S 	Solubi RPI Lim 2 I Blan Solubi Dil Fa Sample Solubi

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Client: Vertex

Project/Site: JRU DI 1A CTB

Job ID: 890-6016-1 SDG: 23E-04616

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-38383	-A-4-B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: So	olubl
Analysis Batch: 71742											
·····, ··· ····	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	34300	F1	12400	48510	F1	mg/Kg		115	90 - 110		
Lab Sample ID: 880-38383	-A-4-C MSD					Cli	ent Sa	ample ID	: Matrix Sp	oike Dup	olicat
Matrix: Solid									Prep	Type: So	olubl
Analysis Batch: 71742											
	Sample	Sample	Spike	MSD	MSD				%Rec		RP
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Chloride	34300	F1	12400	48320	F1	mg/Kg		113	90 _ 110	0	2
Lab Sample ID: 880-38394	-A-10-C MS							Client	Sample ID	: Matrix	Spik
Matrix: Solid									Prep	Type: So	olubl
Analysis Batch: 71742											
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	622		249	884.0		mg/Kg		106	90 - 110		
Lab Sample ID: 880-38394	-A-10-D MSD					Cli	ent Sa	ample ID	: Matrix Sp	oike Dup	olicat
Matrix: Solid								-	Prep	Type: So	olubl
Analysis Batch: 71742										- The second sec	
-	Sample	Sample	Spike	MSD	MSD				%Rec		RP
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lim
Chloride	622		249	874.7		mg/Kg		102	90 - 110	1	2

Client: Vertex Project/Site: JRU DI 1A CTB

Job ID: 890-6016-1 SDG: 23E-04616

GC VOA

Prep Batch: 71831

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Total/NA	Solid	5035	
890-6016-2	BH24-01	Total/NA	Solid	5035	5
890-6016-3	BH24-02	Total/NA	Solid	5035	
890-6016-4	BH24-02	Total/NA	Solid	5035	
890-6016-5	BH24-03	Total/NA	Solid	5035	
890-6016-6	BH24-03	Total/NA	Solid	5035	
890-6016-7	BH24-04	Total/NA	Solid	5035	
890-6016-8	BH24-04	Total/NA	Solid	5035	8
890-6016-9	BH24-05	Total/NA	Solid	5035	
890-6016-10	BH24-05	Total/NA	Solid	5035	9
890-6016-11	BH24-06	Total/NA	Solid	5035	
890-6016-12	BH24-06	Total/NA	Solid	5035	
890-6016-13	BH24-07	Total/NA	Solid	5035	
890-6016-14	BH24-07	Total/NA	Solid	5035	
890-6016-15	BH24-08	Total/NA	Solid	5035	
890-6016-16	BH24-08	Total/NA	Solid	5035	
MB 880-71831/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-71831/1-A	Lab Control Sample	Total/NA	Solid	5035	10
LCSD 880-71831/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6016-1 MS	BH24-01	Total/NA	Solid	5035	
890-6016-1 MSD	BH24-01	Total/NA	Solid	5035	

Analysis Batch: 72133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Total/NA	Solid	8021B	71831
890-6016-2	BH24-01	Total/NA	Solid	8021B	71831
890-6016-3	BH24-02	Total/NA	Solid	8021B	71831
890-6016-4	BH24-02	Total/NA	Solid	8021B	71831
890-6016-5	BH24-03	Total/NA	Solid	8021B	71831
890-6016-6	BH24-03	Total/NA	Solid	8021B	71831
890-6016-7	BH24-04	Total/NA	Solid	8021B	71831
890-6016-8	BH24-04	Total/NA	Solid	8021B	71831
890-6016-9	BH24-05	Total/NA	Solid	8021B	71831
890-6016-10	BH24-05	Total/NA	Solid	8021B	71831
890-6016-11	BH24-06	Total/NA	Solid	8021B	71831
890-6016-12	BH24-06	Total/NA	Solid	8021B	71831
890-6016-13	BH24-07	Total/NA	Solid	8021B	71831
890-6016-14	BH24-07	Total/NA	Solid	8021B	71831
890-6016-15	BH24-08	Total/NA	Solid	8021B	71831
890-6016-16	BH24-08	Total/NA	Solid	8021B	71831
MB 880-71831/5-A	Method Blank	Total/NA	Solid	8021B	71831
LCS 880-71831/1-A	Lab Control Sample	Total/NA	Solid	8021B	71831
LCSD 880-71831/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	71831
890-6016-1 MS	BH24-01	Total/NA	Solid	8021B	71831
890-6016-1 MSD	BH24-01	Total/NA	Solid	8021B	71831

Analysis Batch: 72222

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Total/NA	Solid	Total BTEX	
890-6016-2	BH24-01	Total/NA	Solid	Total BTEX	
890-6016-3	BH24-02	Total/NA	Solid	Total BTEX	

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Client: Vertex Project/Site: JRU DI 1A CTB

GC VOA (Continued)

Analysis Batch: 72222 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6016-4	BH24-02	Total/NA	Solid	Total BTEX	
890-6016-5	BH24-03	Total/NA	Solid	Total BTEX	
890-6016-6	BH24-03	Total/NA	Solid	Total BTEX	
890-6016-7	BH24-04	Total/NA	Solid	Total BTEX	
890-6016-8	BH24-04	Total/NA	Solid	Total BTEX	
890-6016-9	BH24-05	Total/NA	Solid	Total BTEX	
890-6016-10	BH24-05	Total/NA	Solid	Total BTEX	
890-6016-11	BH24-06	Total/NA	Solid	Total BTEX	
390-6016-12	BH24-06	Total/NA	Solid	Total BTEX	
890-6016-13	BH24-07	Total/NA	Solid	Total BTEX	
890-6016-14	BH24-07	Total/NA	Solid	Total BTEX	
890-6016-15	BH24-08	Total/NA	Solid	Total BTEX	
890-6016-16	BH24-08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 71893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Total/NA	Solid	8015NM Prep	
890-6016-2	BH24-01	Total/NA	Solid	8015NM Prep	
890-6016-3	BH24-02	Total/NA	Solid	8015NM Prep	
890-6016-4	BH24-02	Total/NA	Solid	8015NM Prep	
890-6016-5	BH24-03	Total/NA	Solid	8015NM Prep	
890-6016-6	BH24-03	Total/NA	Solid	8015NM Prep	
890-6016-7	BH24-04	Total/NA	Solid	8015NM Prep	
890-6016-8	BH24-04	Total/NA	Solid	8015NM Prep	
890-6016-9	BH24-05	Total/NA	Solid	8015NM Prep	
890-6016-10	BH24-05	Total/NA	Solid	8015NM Prep	
890-6016-11	BH24-06	Total/NA	Solid	8015NM Prep	
890-6016-12	BH24-06	Total/NA	Solid	8015NM Prep	
890-6016-13	BH24-07	Total/NA	Solid	8015NM Prep	
890-6016-14	BH24-07	Total/NA	Solid	8015NM Prep	
890-6016-15	BH24-08	Total/NA	Solid	8015NM Prep	
890-6016-16	BH24-08	Total/NA	Solid	8015NM Prep	
MB 880-71893/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71893/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-71893/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6039-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6039-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 71993

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Total/NA	Solid	8015B NM	71893
890-6016-2	BH24-01	Total/NA	Solid	8015B NM	71893
890-6016-3	BH24-02	Total/NA	Solid	8015B NM	71893
890-6016-4	BH24-02	Total/NA	Solid	8015B NM	71893
890-6016-5	BH24-03	Total/NA	Solid	8015B NM	71893
890-6016-6	BH24-03	Total/NA	Solid	8015B NM	71893
890-6016-7	BH24-04	Total/NA	Solid	8015B NM	71893
890-6016-8	BH24-04	Total/NA	Solid	8015B NM	71893
890-6016-9	BH24-05	Total/NA	Solid	8015B NM	71893

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Job ID: 890-6016-1 SDG: 23E-04616

Client: Vertex Project/Site: JRU DI 1A CTB

GC Semi VOA (Continued)

Analysis Batch: 71993 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-6016-10	BH24-05	Total/NA	Solid	8015B NM	71893	
890-6016-11	BH24-06	Total/NA	Solid	8015B NM	71893	5
890-6016-12	BH24-06	Total/NA	Solid	8015B NM	71893	
890-6016-13	BH24-07	Total/NA	Solid	8015B NM	71893	
890-6016-14	BH24-07	Total/NA	Solid	8015B NM	71893	
890-6016-15	BH24-08	Total/NA	Solid	8015B NM	71893	
890-6016-16	BH24-08	Total/NA	Solid	8015B NM	71893	
MB 880-71893/1-A	Method Blank	Total/NA	Solid	8015B NM	71893	8
LCS 880-71893/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71893	
LCSD 880-71893/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71893	9
890-6039-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	71893	
890-6039-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	71893	
Analysis Batch: 72149						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-6016-1	BH24-01	Total/NA	Solid	8015 NM		
890-6016-2	BH24-01	Total/NA	Solid	8015 NM		
890-6016-3	BH24-02	Total/NA	Solid	8015 NM		
890-6016-4	BH24-02	Total/NA	Solid	8015 NM		13
890-6016-5	BH24-03	Total/NA	Solid	8015 NM		
890-6016-6	BH24-03	Total/NA	Solid	8015 NM		

Analysis Batch: 72149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Total/NA	Solid	8015 NM	
890-6016-2	BH24-01	Total/NA	Solid	8015 NM	
890-6016-3	BH24-02	Total/NA	Solid	8015 NM	
890-6016-4	BH24-02	Total/NA	Solid	8015 NM	
890-6016-5	BH24-03	Total/NA	Solid	8015 NM	
890-6016-6	BH24-03	Total/NA	Solid	8015 NM	
890-6016-7	BH24-04	Total/NA	Solid	8015 NM	
890-6016-8	BH24-04	Total/NA	Solid	8015 NM	
890-6016-9	BH24-05	Total/NA	Solid	8015 NM	
890-6016-10	BH24-05	Total/NA	Solid	8015 NM	
890-6016-11	BH24-06	Total/NA	Solid	8015 NM	
890-6016-12	BH24-06	Total/NA	Solid	8015 NM	
890-6016-13	BH24-07	Total/NA	Solid	8015 NM	
890-6016-14	BH24-07	Total/NA	Solid	8015 NM	
890-6016-15	BH24-08	Total/NA	Solid	8015 NM	
890-6016-16	BH24-08	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 71577

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Soluble	Solid	DI Leach	
890-6016-2	BH24-01	Soluble	Solid	DI Leach	
890-6016-3	BH24-02	Soluble	Solid	DI Leach	
890-6016-4	BH24-02	Soluble	Solid	DI Leach	
890-6016-5	BH24-03	Soluble	Solid	DI Leach	
890-6016-6	BH24-03	Soluble	Solid	DI Leach	
890-6016-7	BH24-04	Soluble	Solid	DI Leach	
890-6016-8	BH24-04	Soluble	Solid	DI Leach	
MB 880-71577/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71577/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71577/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6008-A-2-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6008-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

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Job ID: 890-6016-1 SDG: 23E-04616

Released to Imaging: 5/10/2024 11:00:40 AM

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Job ID: 890-6016-1 SDG: 23E-04616

HPLC/IC

Leach Batch: 71588

HPLC/IC					
each Batch: 71588					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6016-9	BH24-05	Soluble	Solid	DI Leach	
890-6016-10	BH24-05	Soluble	Solid	DI Leach	
890-6016-11	BH24-06	Soluble	Solid	DI Leach	
390-6016-12	BH24-06	Soluble	Solid	DI Leach	
90-6016-13	BH24-07	Soluble	Solid	DI Leach	
90-6016-14	BH24-07	Soluble	Solid	DI Leach	
90-6016-15	BH24-08	Soluble	Solid	DI Leach	
90-6016-16	BH24-08	Soluble	Solid	DI Leach	
IB 880-71588/1-A	Method Blank	Soluble	Solid	DI Leach	
CS 880-71588/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
CSD 880-71588/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
80-38383-A-4-B MS	Matrix Spike	Soluble	Solid	DI Leach	
80-38383-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
80-38394-A-10-C MS	Matrix Spike	Soluble	Solid	DI Leach	
80-38394-A-10-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
nalysis Batch: 71737					
_ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
390-6016-1	BH24-01	Soluble	Solid	300.0	71577
390-6016-2	BH24-01	Soluble	Solid	300.0	71577
890-6016-3	BH24-02	Soluble	Solid	300.0	71577

Analysis Batch: 71737

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6016-1	BH24-01	Soluble	Solid	300.0	71577
890-6016-2	BH24-01	Soluble	Solid	300.0	71577
890-6016-3	BH24-02	Soluble	Solid	300.0	71577
890-6016-4	BH24-02	Soluble	Solid	300.0	71577
890-6016-5	BH24-03	Soluble	Solid	300.0	71577
890-6016-6	BH24-03	Soluble	Solid	300.0	71577
890-6016-7	BH24-04	Soluble	Solid	300.0	71577
890-6016-8	BH24-04	Soluble	Solid	300.0	71577
MB 880-71577/1-A	Method Blank	Soluble	Solid	300.0	71577
LCS 880-71577/2-A	Lab Control Sample	Soluble	Solid	300.0	71577
LCSD 880-71577/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71577
890-6008-A-2-B MS	Matrix Spike	Soluble	Solid	300.0	71577
890-6008-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71577

Analysis Batch: 71742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6016-9	BH24-05	Soluble	Solid	300.0	71588
890-6016-10	BH24-05	Soluble	Solid	300.0	71588
890-6016-11	BH24-06	Soluble	Solid	300.0	71588
890-6016-12	BH24-06	Soluble	Solid	300.0	71588
890-6016-13	BH24-07	Soluble	Solid	300.0	71588
890-6016-14	BH24-07	Soluble	Solid	300.0	71588
890-6016-15	BH24-08	Soluble	Solid	300.0	71588
890-6016-16	BH24-08	Soluble	Solid	300.0	71588
MB 880-71588/1-A	Method Blank	Soluble	Solid	300.0	71588
LCS 880-71588/2-A	Lab Control Sample	Soluble	Solid	300.0	71588
LCSD 880-71588/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71588
880-38383-A-4-B MS	Matrix Spike	Soluble	Solid	300.0	71588
880-38383-A-4-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71588
880-38394-A-10-C MS	Matrix Spike	Soluble	Solid	300.0	71588
880-38394-A-10-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71588

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Job ID: 890-6016-1 SDG: 23E-04616

Lab Sample ID: 890-6016-1 Matrix: Solid

Lab Sample ID: 890-6016-2

Lab Sample ID: 890-6016-3

Lab Sample ID: 890-6016-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/19/24 10:25 Date Received: 01/23/24 08:23

Client Sample ID: BH24-01

Project/Site: JRU DI 1A CTB

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 15:17	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 15:17	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	01/31/24 22:30	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71893	01/29/24 17:13	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	01/31/24 22:30	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		10			71737	01/29/24 04:19	СН	EET MID

Client Sample ID: BH24-01

Date Collected: 01/19/24 10:30

Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 15:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 15:43	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	01/31/24 22:51	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	71893	01/29/24 17:13	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	01/31/24 22:51	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		1			71737	01/29/24 04:40	СН	EET MID

Client Sample ID: BH24-02 Date Collected: 01/19/24 10:35

Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 16:09	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 16:09	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	01/31/24 23:12	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	71893	01/29/24 17:13	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	01/31/24 23:12	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		1			71737	01/29/24 04:47	CH	EET MID

Client Sample ID: BH24-02 Date Collected: 01/19/24 10:45 Date Received: 01/23/24 08:23

	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	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 16:35	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 16:35	SM	EET MID

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Matrix: Solid

5

Job ID: 890-6016-1 SDG: 23E-04616

Lab Sample ID: 890-6016-4 Matrix: Solid

Lab Sample ID: 890-6016-5

Date Collected: 01/19/24 10:45 Date Received: 01/23/24 08:23

Client Sample ID: BH24-02

Project/Site: JRU DI 1A CTB

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			72149	01/31/24 23:32	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	71893	01/29/24 17:13	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	01/31/24 23:32	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		1			71737	01/29/24 04:54	СН	EET MID

Client Sample ID: BH24-03

Date Collected: 01/19/24 10:47 Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 17:01	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 17:01	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	01/31/24 23:53	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	71893	01/29/24 17:13	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	01/31/24 23:53	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		1			71737	01/29/24 05:00	СН	EET MID

Client Sample ID: BH24-03

Date Collected: 01/19/24 10:50 Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 17:27	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 17:27	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 00:14	SM	EET MID
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	71893	01/29/24 17:13	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 00:14	SM	EET MID
Soluble	Leach	DI Leach			5.01 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		1			71737	01/29/24 05:07	CH	EET MID

Client Sample ID: BH24-04

Date Collected: 01/19/24 11:00 Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 17:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 17:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 00:55	SM	EET MID
Total/NA Total/NA	Prep Analysis	8015NM Prep 8015B NM		1	9.92 g 1 uL	10 mL 1 uL	71893 71993	01/29/24 17:13 02/01/24 00:55	TKC SM	EET MID EET MID

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> 11 12 13

Lab Sample ID: 890-6016-6

Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-6016-7 Matrix: Solid

Lab Chronicle

Job ID: 890-6016-1 SDG: 23E-04616

Matrix: Solid

Matrix: Solid

Matrix: Solid

9

Lab Sample ID: 890-6016-7

Lab Sample ID: 890-6016-8

Lab Sample ID: 890-6016-9

Client Sample ID: BH24-04 Date Collected: 01/19/24 11:00

Date Received: 01/23/24 08:23

Project/Site: JRU DI 1A CTB

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		20			71737	01/29/24 05:14	СН	EET MID

Client Sample ID: BH24-04

Date Collected: 01/19/24 11:10 Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 18:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 18:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 01:16	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	71893	01/29/24 17:13	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 01:16	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71577	01/25/24 10:14	SA	EET MID
Soluble	Analysis	300.0		10			71737	01/29/24 05:21	СН	EET MID

Client Sample ID: BH24-05 Date Collected: 01/19/24 11:20 Date Received: 01/23/24 08:23

	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	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 18:45	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 18:45	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 01:36	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	71893	01/29/24 17:13	ТКС	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 01:36	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	71588	01/25/24 11:20	SA	EET MID
Soluble	Analysis	300.0		50			71742	01/30/24 08:43	СН	EET MID

Client Sample ID: BH24-05 Date Collected: 01/19/24 11:30 Date Received: 01/23/24 08:23

Lab Sample ID: 890-6016-10 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			5.02 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 19:11	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 19:11	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 01:57	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	71893	01/29/24 17:13	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 01:57	SM	EET MID
Soluble	Leach	DI Leach			5.00 g	50 mL	71588	01/25/24 11:20	SA	EET MID
Soluble	Analysis	300.0		1			71742	01/30/24 09:16	СН	EET MID

Eurofins Carlsbad

- -

Released to Imaging: 5/10/2024 11:00:40 AM

Batch

Туре

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Leach

Prep

Batch

Method

5035

8021B

Total BTEX

8015NM Prep

8015B NM

DI Leach

300.0

8015 NM

Client: Vertex

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Soluble

Soluble

Project/Site: JRU DI 1A CTB

Client Sample ID: BH24-06

Date Collected: 01/19/24 11:40

Date Received: 01/23/24 08:23

Initial

Amount

5.03 g

5 mL

10.06 g

1 uL

5.01 g

Final

Amount

5 mL

5 mL

10 mL

1 uL

50 mL

Batch

71831

72133

72222

72149

71893

71993

71588

71742

Number

Dil

1

1

1

1

1

Factor

Run

Job ID: 890-6016-1 SDG: 23E-04616

Lab Sample ID: 890-6016-11

Analyst

MNR

MNR

SM

SM

ткс

SM

SA

СН

Lab Sample ID: 890-6016-12

Lab Sample ID: 890-6016-13

Lab Sample ID: 890-6016-14

Prepared

or Analyzed

01/29/24 13:41

02/01/24 20:55

02/01/24 20:55

02/01/24 02:18

01/29/24 17:13

02/01/24 02:18

01/25/24 11:20

01/30/24 09:22

Matrix: Solid

Lab

EET MID

Matrix: Solid

Matrix: Solid

9 1(

11 12 13

Client Sample ID: BH24-06 Date Collected: 01/19/24 11:50

Date Received: 01/23/24 08:23

	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	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 21:21	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 21:21	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 02:38	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	71893	01/29/24 17:13	ТКС	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 02:38	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	71588	01/25/24 11:20	SA	EET MID
Soluble	Analysis	300.0		1			71742	01/30/24 09:57	СН	EET MID

Client Sample ID: BH24-07 Date Collected: 01/19/24 12:00

Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 21:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 21:48	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 02:59	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	71893	01/29/24 17:13	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 02:59	SM	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	71588	01/25/24 11:20	SA	EET MID
Soluble	Analysis	300.0		1			71742	01/30/24 09:33	СН	EET MID

Client Sample ID: BH24-07 Date Collected: 01/19/24 12:10 Date Received: 01/23/24 08:23

	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	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 22:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 22:14	SM	EET MID

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Matrix: Solid

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Lab Chronicle

Client: Vertex Project/Site: JRU DI 1A CTB

Client Sample ID: BH24-07

Date Collected: 01/19/24 12:10 Date Received: 01/23/24 08:23

	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			72149	02/01/24 03:20	SM	EET MID
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	71893	01/29/24 17:13	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 03:20	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71588	01/25/24 11:20	SA	EET MID
Soluble	Analysis	300.0		1			71742	01/30/24 10:13	СН	EET MID

Client Sample ID: BH24-08

Date Collected: 01/19/24 12:20

Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 22:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 22:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 03:41	SM	EET MID
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	71893	01/29/24 17:13	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 03:41	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71588	01/25/24 11:20	SA	EET MID
Soluble	Analysis	300.0		1			71742	01/30/24 10:20	СН	EET MID

Client Sample ID: BH24-08

Date Collected: 01/19/24 12:30 Date Received: 01/23/24 08:23

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	71831	01/29/24 13:41	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72133	02/01/24 23:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72222	02/01/24 23:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			72149	02/01/24 04:02	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	71893	01/29/24 17:13	ткс	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	71993	02/01/24 04:02	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71588	01/25/24 11:20	SA	EET MID
Soluble	Analysis	300.0		1			71742	01/30/24 09:51	CH	EET MID

Laboratory References:

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

Job ID: 890-6016-1 SDG: 23E-04616

Lab Sample ID: 890-6016-14 Matrix: Solid

Lab Sample ID: 890-6016-15 Matrix: Solid

Matrix: Solid

Lab Sample ID: 890-6016-16

	Acc	reditation/Cerf	tification Summary			
lient: Vertex roject/Site: JRU DI 1A CT	ТВ				Job ID: 890-6016-1 SDG: 23E-04616	
aboratory: Eurofins						
nless otherwise noted, all analy	/tes for this laboratory were co	overed under each accredit	tation/certification below.			
Authority	Progra	ım	Identification Number	Expiration Date	_	
exas	NELAF)	T104704400-23-26	06-30-24	-	Ī
The following analytes a	are included in this report. bu	t the laboratory is not certif	ied by the governing authority. This lis	t mav include analvtes		
• •	oes not offer certification.			· · · · · · · · · · · · · · · · · · ·		
Analysis Method	Prep Method	Matrix	Analyte			
8015 NM		Solid	Total TPH			
Total BTEX		Solid	Total BTEX			
						i

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Method Summary

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6016-1 SDG: 23E-04616

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe	erences:		
ASTM = A	ASTM International		
EPA = US	Environmental Protection Agency		
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ec	lition, November 1986 And Its Updates.	
TAL SOP	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences:		
EET MID	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Laboratory References:

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Sample Summary

Client: Vertex Project/Site: JRU DI 1A CTB

390-6016-1	Client Sample ID	Matrix	Collected	Received	Depth	
	BH24-01	Solid	01/19/24 10:25	01/23/24 08:23	0	
390-6016-2	BH24-01	Solid	01/19/24 10:30	01/23/24 08:23	2	
390-6016-3	BH24-02	Solid	01/19/24 10:35	01/23/24 08:23	0	
390-6016-4	BH24-02	Solid	01/19/24 10:45	01/23/24 08:23	2	
390-6016-5	BH24-03	Solid	01/19/24 10:47	01/23/24 08:23	0	
390-6016-6	BH24-03	Solid	01/19/24 10:50	01/23/24 08:23	2	
390-6016-7	BH24-04	Solid	01/19/24 11:00	01/23/24 08:23	0	
390-6016-8	BH24-04	Solid	01/19/24 11:10	01/23/24 08:23	2	
390-6016-9	BH24-05	Solid	01/19/24 11:20	01/23/24 08:23	0	
390-6016-10	BH24-05	Solid	01/19/24 11:30	01/23/24 08:23	2	
390-6016-11	BH24-06	Solid	01/19/24 11:40	01/23/24 08:23	0	
390-6016-12	BH24-06	Solid	01/19/24 11:50	01/23/24 08:23	2	
390-6016-13	BH24-07	Solid	01/19/24 12:00	01/23/24 08:23	0	
390-6016-14	BH24-07	Solid	01/19/24 12:10	01/23/24 08:23	2	
390-6016-15	BH24-08	Solid	01/19/24 12:20	01/23/24 08:23	0	
390-6016-16	BH24-08	Solid	01/19/24 12:30	01/23/24 08:23	2	

Job ID: 890-6016-1 SDG: 23E-04616

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	Environment Testing Xenco		rubostovi, t. k. (ast). 2(19-200), Dallas, f. X. (219) 902-0300 Midland, TX (432) 704-5440, San Antrono, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	g =	
Project Manager:	Chama Wiyan)	Bill to: (if different)	Gir WIT	www.xenco.com	Page 1 of X
	155	Company Name	5,7>	Work Ord	
Address: 0m	(LU	Address:	11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Frogram: USI/PSI PRPU Brownheids	elds URC Superfund
City, State ZIP:	a wh	City, State ZIP:		el II 🗌 Level III 🗍	
Phone:	-	Email:			Other:
	DT IF CIB	Around	ANALYSIS REQUEST	EST	Praservative Codes
1	-04616		Pres. Code		None: NO DI Water: H ₂ O
Project Location: 5K	1 01 14 C1B.	Due Date: 01. 20. 24	•,	8	
	~0149	AI starts the day received by 4:30pm	12	Ŷ	
SAMPLE RECEIPT	Temp Blank: (Ye) No	Wetke: Red No	510, 510,		Hasu 4:Ha NaOH:Na
t;	to Thermometer		0 { 8	H ₃	H3PO 4: HP NaHSO NARIS
1	ð.	+	2 3 8)	EN .	Na,5,0,: NaSO
seals:	Yes No WA Temperature Reading:	5º	X	Zu	Zn Acetate+NaOH: Zn
inter containers:	Corrected Temperature:		E ST	Nac	NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix Date Sampled Sa	Time Depth Grab/ # Sampled Depth Comp Co	tont T Cont T		Sample Comments
HOU WIL	300 1. 19. 24 W	10:25 01 4			
0-1		8			
100 100					
0-1-	31	12 57.0 10 10 10			
H24_03	20	100			
HJH OH	A A A A A A A A A A A A A A A A A A A	00			
424 - OU		-			
20-HCH	([L: 20 0!			
50- het	V V II	30 21	222		
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	8RCR	13PPM Texas 11 LP/SPLP 6010 : 8R0	A 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo NI K Se Ag SiO ₂ Na Sr TI Sn U V Zn TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo NI Se Ag TI U Hgr 1631/2451/7450/72471	Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn Ag Tl U Hg: 16317245177470	n U V Zn 0 / 7471
e: Signature of this document and re vice. Eurofins Xenco will be liable on ofins Xenco. A minimum charge of S.	inquichment of samples constitutes a valid pr // for the cost of samples and shall not assum \$5.00 will be applied to each project and a ch	rrchase order from client company to E + any responsibility for any losses or exp arge of \$5 for each sample submitted to	Notice: Signature of this document and tellroutshmant of samplas constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of services. Eurofins Xenco villa be lable only for the cust of samples and shall not assume any responsibility for any losses or expenses incurred by the fillaters and subcontractors. It assigns standard terms and conditions of services. Eurofins Xenco, Kanfiliaters and subcontractors. It assigns standard terms and conditions of services. Eurofins Xenco, Nami house are due to distribute to subcontractors by the custor of the fillaters and subcontractors. It is applied to each project and a charge of \$5 for each annite to submitted to Eurofins Xenco, hun house are due to distribute to construct exercise to the service and a charge of \$5 for each annite to submitted to Eurofins Xenco. In the non-united material terms of the contractors and the contractors are also accusted to the contractors and and the contractors are also accusted to the contractors are unit to anneutice to the contractors and accusted to the contractors are also accusted to the contractors are unit to an even of the contractors are also accusted to the contractors accusted to the contractors accusted to th		
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12:2	allen	8	125		auti Jaron
			6		

Loc: 890 6016

Released to Imaging: 5/10/2024 11:00:40 AM

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1	c		Hobbs, NM	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199		
Project Manager:	nce, Huvon		Bill to: (if different)	Garren aneum		3
Company Name: Nurth	A. IXTO		Company Name:	0 x to 1	Directions 11CT/DCT	
Address:	0		Address:	on art	6	
City, State ZIP:	11		City, State ZIP: .		Reporting: Level II	Reporting: Level II Cevel III PST/UST TRRP Level IV
Phone:		Email:			Defiverables: EDD	□ ADaPT □ Other:
1	DI IACTO	Z			ANALYSIS REQUEST	Preservative Codes
Project Number:	197616	Routine	Code			None: NO DI Water: H ₂ O
Project Location: JAU NT Sampler's Name: Ulu Mayon	14 CUS	Due Date: 01-00-2	01-00-201 day received by	(
,		the lab, if receiv	1	10		2
-	×	Wet Ice:	Yea No	0 5		H3PO 4:HP
Cooler Custody Seals: Yes	Yes No N/A Correction Ecolor	10:	uered	81		NaHSO 4: NABIS
		teading:		2		Na ₂ S ₂ O ₃ : NaSO 3
		iperature:		25 C		Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC
Sample Identification	Matrix Date	Time	Depth Grab/ # of	1.00		Samula Commants
8429.06	3	41:4		0 1 -		
424-06		1:50				
124-07	-	13:00				
DU 11 OK		3.10				
		2.20				
	»	N		>		
Total 200.7 / 6010 200.8		BRCRA 13PPM Texas 11	Texas 11 AI Sb	AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO, Na Sr TI Sn U V Zn	Pb Mg Mn Mo Ni K Se Ag	SiO, Na Sr TI Sn U V Zn
Lircle Method(s) and Metal(s) to be analyzed	to be analyzed	TCLP / SPLP	6010 : 8RCRA S	TCLP/SPLP6010 : BRCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U	Mo Ni Se Ag TI U Hg: 1	Hg: 1631/245.1/7470 /7471
e agriature or dis occurrent and relinquis rice. Eurofins Xenco vill be liable only for t offns Xenco. A minimum charge of \$85.00	Atment of samples constitutes a valid the cost of samples and shall not assu will be applied to each project and a	purchase order fro Ime any responsible charge cf \$5 for ea	m client company to Eurof. Ity for any losses or expens ch sample submitted to Eu	week-aground of our second and reinquistment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Furnifix Xenco will be lable only for the cost of samples and single of 55 for each stample submitted to Eurofins Xenco, harminum charge of \$55.00 will be applied to each project and a charge of \$55 for each submitted to Eurofins Xenco, but not analyzed. These terms will be applied to each project and a charge of \$5 for each submitted to Eurofins Xenco, but not analyzed. These terms will be enforced to relay project and a charge of \$5 for each submitted to Eurofins Xenco, but not analyzed. These terms will be enforced to relay project and a charge of \$5 for each submitted to Eurofins Xenco, but not analyzed. These terms will be enforced previously negotiated.	andard terms and conditions instances beyond the control forced unless previously negotiated.	
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	club		30			
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1001 S F78		RRC Superfund		TRRP 🔲 Level IV 🔲	Other:	Preservative Codes	DI Water [.] H ₂ O	Cool MeOH: Me		4:HP	NaHSO 4: NABIS	Na 22 O3. NaSO 3	Zn Acetate+NaOH. Zn NaOH+Ascorbic Acid: SAPC		sample Comments						stody			U V Zn	1/14/1		Date/Time			Revised Date: 0875/2020 Rev. 2020.2	320
g	Work Order Comm	Program: UST/PST PRP Brownfields		Reporting: Level II 🔲 Level III 🗍 PST/UST	Deliverables: EDD ADaPT		None [.] NO	Cool: Cool		H:*OdEH	NaHS	Na ₂ S	Zn Ac								Chain of Custody			Mo Ni K Se Ag SiO ₂ Na Sr TI Sn	и 0 пд: юз 1/243.1/74/0 dtbors	control sły negotiated.	Received by: (Signature)				
Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, Sain Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carleback, NM (572) 988-3199	Ill grun !	X10 J	Stat		Detr	ANALYSIS REQUEST	. 41	· , ((12	7.0	28)	+1-	11 V	+									AISD As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr TI Sn U V Zn PA Sh As Ba Bo Cd Cr Co Cu Ph Mn Mn Ni So Ag TI U Una 1231 / 745 1 7770 / 7771	White Signature of this document and relinquishment of samples constitutes a valid purchase order from cleart company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions	A renctor will be lable only for the cost of samples and shall not assume any responsionity for any losses of expenses inclured of the control of the control the control of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	Date/Time Relinquished by: (Signature)	:23 1/28	4	<u>0</u>	1
nment Testing	MILON Bill to: (if different)	rV Company Name:	Address:	City, State ZIP:	Email:	n Around	A Routine Rush	14 C1B.	the lab, if received by 4:30pm	(re) No Wetke: (re) No B	Thermometer ID: The 207	Correction Factor:	Lemperature Reading: Corrected Temperature:	Date Time Grab/	led Sampled Uepun Comp	N. 19.24	 	m		11 12 12 12 12 11 11 12 12 12 12 12 12 1	11-10		┝─┤	BRCRA 13PPM Texas 11 Trip/cpip.com/0.8p/	angles constitutes a valid purchase order from client company to Eu	r samples and shall not assume any responsibility for any losses or exp piled to each project and a charge of \$5 for each sample submitted tr	ived by: (Signature)	The hard second and the second s			лимининин малининин
eurofins Enviro	135	Company Name: Vertex / XTU	Address: 0m W	City, State ZIP: 10 AL	Phone:	Project Name: J & U D 1	0410	Project Location: 3RU 01 Samoler's Name: 10 01 01	\mathbb{H}		ť	Yes No	Total Containers: Tes No	1		13HJU - 10 1	$\sum_{i=1}^{n}$	1	10 KJH - U 3	131-1-02	, TC	1	0H24-05 U	Total 200.7 / 6010 200.8 / 6020: Circle Method(c) and Metal(c) to be analyzed	Notice: Signature of this document and relinquishment of	or service. Euromis venco will be lable only for the cost of of Eurofins Xenco. A minimum charge of \$85.00 will be ap	Relinquished by: (Signature)		3	[-	openander and a second and a second a second and a second se

2/2/2024

Page 105 of 326

Work Order No: 10 3215100 /		Reporting: Level II Level III PST/UST TRRP Level IV	Preservative Codes	None NO DI Water H ₂ O Cool. Cool MeOH: Me HCL: HC HN0 3. HN H2504. H2 NaOH: Na	H ₃ PO 4. HP NaHSO 4. NABIS Na ₂ 5 ₂ O 3. NASO 3 Zn Acetate+NaOH: Zn NaOH+Ascorbic Acid: SAPC	Sample Comments	6016	K Se Ag SiO ₂ Na Sr TI Sn U V Zn Hg: 1631/245.1/7470/7471	Received by: (Signature) Date/Time	1 2 3 4 4 5 6 7 8 9
arty gas 💫	Qartel W Galler 2.70 January Program: US State of Project:	Reporting: L Deliverables:	ANALYSIS REQUEST					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Date/Time Relinquished by: (Signature) $\sqrt[4]{\sqrt{2J}} \sqrt{9}^{2}$	- 10 11 12 13 •
ivironment Testing	UNDANCE HUKON BIII to: (if different) VUMPAN / XTO COMPANY NAME: 1.100 Address:	ON D. City, State ZIP:	UDI LACTO Turn Around	236 04 616 Routine Push 520 NT 1A CT13 Due Date: 01. 00. 211 101. 101. 2070 TAT starts the day received by the lab, if received by 4:30pm	SAMPLE RECEIPT Temp Blank: Ves No Wer res: Yes No Samples Received Intact: Yes No Thermometer ID: Cooler Custody Seals: Yes No Sample Custody Seals: Yes No No Yes No Torrection Factor: Sample Custody Seals: Yes No No Yes Torrection Factor: Sample Custody Seals: Yes No No Torrection Factor: Sample Custody Seals: Yes No No Torrection Factor: Sample Custody Seals: Yes No No	Depth. Grab/ Comp	V 12:30	Total 200.7 / 6010 200.8 / 6020: BRCRA 1.3 PM 1.4 PM 1.	Relinquished by: (Signature) Received by: (Signature)	

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Job Number: 890-6016-1 SDG Number: 23E-04616

List Source: Eurofins Carlsbad

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6016 List Number: 1 Creator: Lopez, Abraham

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

14

Job Number: 890-6016-1 SDG Number: 23E-04616

List Source: Eurofins Midland

List Creation: 01/24/24 02:02 PM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6016 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").
Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/7/2024 3:20:19 PM

JOB DESCRIPTION

JRV DI 1A CTB 23E - 04616

JOB NUMBER

890-6025-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/7/2024 3:20:19 PM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-6025-1 SDG: 23E - 04616

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	Definitions/Glossary		
Client: Vertex		ob ID: 890-6025-1 SDG: 23E - 04616	5
Project/Site: JR		3DG: 23E - 04010	
Quaimers			3
GC VOA Qualifier	Qualifier Description		4
*+	LCS and/or LCSD is outside acceptance limits, high biased.		
S1-	Surrogate recovery exceeds control limits, low biased.		5
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		
U	Indicates the analyte was analyzed for but not detected.		8
HPLC/IC			
Qualifier	Qualifier Description		C
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.		
<u>¤</u>	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		4
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL	Method Quantitation Limit		
NC	Not Calculated		

Not Detected at the reporting limit (or MDL or EDL if shown) Negative / Absent

NEG POS Positive / Present

ND

PQL Practical Quantitation Limit PRES Presumptive

QC Quality Control

Relative Error Ratio (Radiochemistry) RER

RL Reporting Limit or Requested Limit (Radiochemistry)

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

Toxicity Equivalent Factor (Dioxin) TEF

Toxicity Equivalent Quotient (Dioxin) TEQ

TNTC Too Numerous To Count

Case Narrative

Job ID: 890-6025-1

Client: Vertex Project: JRV DI 1A CTB

Job ID: 890-6025-1

Eurofins Carlsbad

Job Narrative 890-6025-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/24/2024 11:02 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -5.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BG 24 - 01 (890-6025-1), BG 24 - 01 (890-6025-2) and BG 24 - 01 (890-6025-3).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: BG 24 - 01 (890-6025-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-72103 and analytical batch 880-72315 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 880-72315 recovered outside control limits for the following analytes: MTBE.

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 matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71752 and analytical batch 880-72446 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71672 and analytical batch 880-71748 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

RL

0.00198

0.00198

0.00198

0.00396

0.00198

0.00396

Limits

70 - 130

70 - 130

RL

0.00396

Job ID: 890-6025-1 SDG: 23E - 04616

Client Sample ID: BG 24 - 01

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

Method: TAL SOP Total BTEX - Total BTEX Calculation

Result Qualifier

<0.00198 U

<0.00198 U

<0.00198 U*+

<0.00396 U*+

<0.00198 U*+

<0.00396 U*+

88

77

Result Qualifier

U

%Recovery

<0.00396

Qualifier

Date Collected: 01/23/24 12:00 Date Received: 01/24/24 11:02

Project/Site: JRV DI 1A CTB

Sample Depth: 0'

Client: Vertex

Analyte

Benzene

Toluene

o-Xylene

Surrogate

Analyte

Total BTEX

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Lab Sample ID: 890-6025-1

Analyzed

02/05/24 17:32

02/05/24 17:32

02/05/24 17:32

02/05/24 17:32

02/05/24 17:32

02/05/24 17:32

Analyzed

02/05/24 17:32

02/05/24 17:32

Analyzed

02/05/24 17:32

Matrix: Solid

Dil Fac

1

1

1

1

1

1

Dil Fac

Dil Fac

5

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			02/06/24 20:42	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.3	U	50.3	mg/Kg		01/27/24 21:45	02/06/24 20:42	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		01/27/24 21:45	02/06/24 20:42	1
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		01/27/24 21:45	02/06/24 20:42	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130			01/27/24 21:45	02/06/24 20:42	1
o-Terphenyl	88		70 - 130			01/27/24 21:45	02/06/24 20:42	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1770		24.9	mg/Kg			01/31/24 21:20	5
lient Sample ID: BG 24 - 01						Lab San	nple ID: 890-	6025-2
ate Collected: 01/23/24 12:10							Matri	x: Solid
ate Received: 01/24/24 11:02								
ample Depth: 2'								
-		ounds (GC)						
Method: SW846 8021B - Volatile (Organic Comp							
Method: SW846 8021B - Volatile (Analyte	• •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	• •	Qualifier	·	Unit mg/Kg	<u> </u>	Prepared 02/01/24 10:19	Analyzed 02/05/24 17:52	Dil Fac
Analyte	Result	Qualifier U	RL		<u> </u>	<u> </u>		Dil Fac

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Unit

mg/Kg

D

D

Prepared

02/01/24 10:19

02/01/24 10:19

02/01/24 10:19

02/01/24 10:19

02/01/24 10:19

02/01/24 10:19

Prepared

02/01/24 10:19

02/01/24 10:19

Prepared

Toluene Ethylbenzene <0.00199 U*+ 0.00199 mg/Kg 02/01/24 10:19 02/05/24 17:52 0.00398 m-Xylene & p-Xylene <0.00398 U*+ 02/01/24 10:19 02/05/24 17:52 mg/Kg 1 o-Xylene 0.00199 02/01/24 10:19 <0.00199 U*+ mg/Kg 02/05/24 17:52 1 <0.00398 U*+ 0.00398 02/01/24 10:19 Xylenes, Total mg/Kg 02/05/24 17:52 1 Limits Surrogate %Recovery Qualifier Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 70 - 130 02/01/24 10:19 02/05/24 17:52 104

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client Sample Results

Job ID: 890-6025-1 SDG: 23E - 04616

Client Sample ID: BG 24 - 01

Date Collected: 01/23/24 12:10	
Date Received: 01/24/24 11:02	

Project/Site: JRV DI 1A CTB

Lab Sample ID: 890-6025-2

Matrix: Solid

5

Date Received: 01/2 Sample Depth: 2'

Client: Vertex

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

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
1,4-Difluorobenzene (Surr)	71		70 - 130			02/01/24 10:19	02/05/24 17:52	
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	ulation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/05/24 17:52	
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.1	U	50.1	mg/Kg			02/06/24 21:03	
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Gasoline Range Organics (GRO)-C6-C10	<50.1	U	50.1	mg/Kg		01/27/24 21:45	02/06/24 21:03	
Diesel Range Organics (Over	<50.1	U	50.1	mg/Kg		01/27/24 21:45	02/06/24 21:03	
C10-C28)		-						
Oll Dange Organiae (Over C28, C26)	<50.1	U	50.1	mg/Kg		01/27/24 21:45	02/06/24 21:03	
Oli Range Organics (Over C28-C36)								
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
Oll Range Organics (Over C28-C36) Surrogate 1-Chlorooctane	% Recovery 96	Qualifier	Limits			Prepared 01/27/24 21:45	Analyzed	Dil Fa

AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FacChloride1594.98mg/Kg01/31/24 21:241

Client Sample ID: BG 24 - 01

Date Collected: 01/23/24 12:20 Date Received: 01/24/24 11:02 Sample Depth: 4'

Lab Sample ID: 890-6025-3 Matrix: Solid

Method: SW846 8021B - Volati		Qualifier		11	D	Dramanad	Analyzad	Dil Fac
Analyte			RL	Unit		Prepared	Analyzed	
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 18:12	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 18:12	1
Ethylbenzene	<0.00200	U *+	0.00200	mg/Kg		02/01/24 10:19	02/05/24 18:12	1
m-Xylene & p-Xylene	<0.00401	U *+	0.00401	mg/Kg		02/01/24 10:19	02/05/24 18:12	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		02/01/24 10:19	02/05/24 18:12	1
Xylenes, Total	<0.00401	U *+	0.00401	mg/Kg		02/01/24 10:19	02/05/24 18:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		70 - 130			02/01/24 10:19	02/05/24 18:12	1
1,4-Difluorobenzene (Surr)	67	S1-	70 - 130			02/01/24 10:19	02/05/24 18:12	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/05/24 18:12	1
Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	50.4		50.0	mg/Kg			02/06/24 21:24	

Eurofins Carlsbad

Client Sample Results

Job ID: 890-6025-1 SDG: 23E - 04616

Client Sample ID: BG 24 - 01

Date Collected: 01/23/24 12:20 Date Received: 01/24/24 11:02

Project/Site: JRV DI 1A CTB

Sample Depth: 4'

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	50.4		50.0	mg/Kg		01/27/24 21:45	02/06/24 21:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/27/24 21:45	02/06/24 21:24	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/27/24 21:45	02/06/24 21:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130			01/27/24 21:45	02/06/24 21:24	1
o-Terphenyl	93		70 - 130			01/27/24 21:45	02/06/24 21:24	1
•								
Method: EPA 300.0 - Anions, Ion	ı Chromatograr	ohy - Solubl	e					
Method: EPA 300.0 - Anions, Ion Analyte	• • •	o <mark>hy - Solubl</mark> e Qualifier	e RL	Unit	D	Prepared	Analyzed	Dil Fac

Lab Sample ID: 890-6025-3 Matrix: Solid

Job ID: 890-6025-1 SDG: 23E - 04616

Prep Type: Total/NA

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Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)	
880-38487-A-1-E MS	Matrix Spike	119	100	
880-38487-A-1-F MSD	Matrix Spike Duplicate	120	98	
390-6025-1	BG 24 - 01	88	77	
390-6025-2	BG 24 - 01	104	71	
390-6025-3	BG 24 - 01	92	67 S1-	
.CS 880-72103/1-A	Lab Control Sample	130	97	
_CSD 880-72103/2-A	Lab Control Sample Dup	120	98	
MB 880-72103/5-A	Method Blank	76	77	

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-6014-A-1-E MS	Matrix Spike	95	90
890-6014-A-1-F MSD	Matrix Spike Duplicate	82	75
890-6025-1	BG 24 - 01	87	88
890-6025-2	BG 24 - 01	96	97
890-6025-3	BG 24 - 01	92	93
LCS 880-71752/2-A	Lab Control Sample	85	105
LCSD 880-71752/3-A	Lab Control Sample Dup	103	116
MB 880-71752/1-A	Method Blank	116	119

Surrogate Legend

1CO = 1-Chlorooctane OTPH = o-Terphenyl

QC Sample Results

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72103	/ 5-A

Matrix: Solid Analysis Batch: 72315

							i i op Batoi	
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130			02/01/24 10:19	02/05/24 11:23	1
1,4-Difluorobenzene (Surr)	77		70 - 130			02/01/24 10:19	02/05/24 11:23	1

Lab Sample ID: LCS 880-72103/1-A Matrix: Solid

Analysis Batch: 72315

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1115		mg/Kg		112	70 - 130	
Toluene	0.100	0.1061		mg/Kg		106	70 - 130	
Ethylbenzene	0.100	0.1479	*+	mg/Kg		148	70 - 130	
m-Xylene & p-Xylene	0.200	0.2897	*+	mg/Kg		145	70 - 130	
o-Xylene	0.100	0.1391	*+	mg/Kg		139	70 - 130	

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

Lab Sample ID: LCSD 880-72103/2-A

Matrix: Solid

Analysis Batch: 72315						Prep	Batch:	72103
	Spike	LCSD LCS	D			%Rec		RPD
Analyte	Added	Result Qua	lifier Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1090	mg/Kg		109	70 - 130	2	35
Toluene	0.100	0.1188	mg/Kg		119	70 - 130	11	35
Ethylbenzene	0.100	0.1481 *+	mg/Kg		148	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.2823 *+	mg/Kg		141	70 - 130	3	35
o-Xylene	0.100	0.1355 *+	mg/Kg		136	70 - 130	3	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-38487-A-1-E MS

Analysis Batch: 72315									Pre	Batch: 72103
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0996	0.09519		mg/Kg		96	70 - 130	
Toluene	<0.00200	U	0.0996	0.1036		mg/Kg		104	70 - 130	

5

6 7 8

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72103

Analyte	Posult	Qualifier	Added	Resu
Benzene	<0.00200		0.0996	0.0951
Toluene	<0.00200		0.0996	0.103
lene	<0.00200	U	0.0996	0.10

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 72103

140	70 - 150	
145	70 - 130	
139	70 - 130	

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

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Prep Type: Total/NA

Lab Sample ID: 880-38487-A-1-E MS

QC Sample Results

MS MS

0.1258

0.2439

0.1161

Result Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.0996

0.199

0.0996

Limits

70 - 130

70 - 130

70 - 130

Project/Site: JRV DI 1A CTB

Analysis Batch: 72315

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

<0.00200

%Recovery

<0.00401 U*+

<0.00200 U*+

119

100

98

MS MS

Result Qualifier

U *+

Qualifier

Prep Type: Total/NA

Prep Batch: 72103

Client Sample ID: Matrix Spike

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

126

122

117

D

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

Matrix: Solid Analysis Batch: 72315

Lab Sample ID: 880-38487-A-1-F MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 72315									Prep	Batch:	72103	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	< 0.00200	U	0.0994	0.09331		mg/Kg		94	70 - 130	2	35	
Toluene	<0.00200	U	0.0994	0.1018		mg/Kg		102	70 - 130	2	35	ī
Ethylbenzene	<0.00200	U *+	0.0994	0.1232		mg/Kg		124	70 - 130	2	35	
m-Xylene & p-Xylene	<0.00401	U *+	0.199	0.2377		mg/Kg		120	70 - 130	3	35	ï
o-Xylene	<0.00200	U *+	0.0994	0.1135		mg/Kg		114	70 - 130	2	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	120		70 - 130									

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

Lab Sample ID: MB 880-71752/1- Matrix: Solid Analysis Batch: 72446	A					Client Sa	mple ID: Metho Prep Type: 1 Prep Batch	Total/NA
	MB				_			
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics	<50.0	U	50.0	mg/Kg		01/27/24 21:45	02/06/24 18:36	1
(GRO)-C6-C10								
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/27/24 21:45	02/06/24 18:36	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/27/24 21:45	02/06/24 18:36	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1-Chlorooctane	116		70 - 130			01/27/24 21:45	02/06/24 18:36	1
o-Terphenyl	119		70 - 130			01/27/24 21:45	02/06/24 18:36	1
Lab Sample ID: LCS 880-71752/2	2- A				c	Client Sample I	D: Lab Control	Sample

Lab Sample ID: LCS 880-71752/2-A Matrix: Solid Analysis Batch: 72446

Analysis Batch: 72446							Prep	Batch: 71752
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics	1000	917.7		mg/Kg		92	70 - 130	
(GRO)-C6-C10								
Diesel Range Organics (Over	1000	932.5		mg/Kg		93	70 - 130	
C10-C28)								

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Prep Type: Total/NA

QC Sample Results

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

Lab Sample ID: LCS 880-7175	52/2-A						Client	Sample	ID: Lab Co		
Matrix: Solid									Prep T	ype: To	tal/N
Analysis Batch: 72446									Prep	Batch:	7175
	LCS	LCS									
Surrogate	%Recovery		Limits								
1-Chlorooctane	85		70 - 130								
o-Terphenyl	105		70 - 130								
Lab Sample ID: LCSD 880-717	752/3-A					Clier	t Sam	nple ID:	Lab Contro	I Sampl	e Dup
Matrix: Solid									Prep T	ype: To	tal/N/
Analysis Batch: 72446									Prep	Batch:	7175
-			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)-C6-C10			1000	961.9		mg/Kg		96	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	961.8		mg/Kg		96	70 - 130	3	20
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	103		70 - 130								
o-Terphenyl	116		70 - 130								
Analysis Batch: 72446		Sample	Spike	MS	MS				%Rec	Batch:	7175
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)-C6-C10		U F1 F2	1010	840.0		mg/Kg		79	70 - 130		
Diesel Range Organics (Over C10-C28)	115	F1	1010	864.2		mg/Kg		74	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	95		70 - 130								
o-Terphenyl	90		70 - 130								
Lab Sample ID: 890-6014-A-1-	-F MSD					Cli	ent Sa	ample IC): Matrix Sp	oike Dur	olicate
Matrix: Solid	-									ype: To	
Analysis Batch: 72446										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
		U F1 F2	1010		F1 F2	mg/Kg		63	70 - 130	21	20
	115	F1	1010	726.4	F1	mg/Kg		61	70 - 130	17	20
(GRO)-C6-C10 Diesel Range Organics (Over		F1 MSD	1010	726.4	F1	mg/Kg		61	70 - 130	17	20
(GRO)-C6-C10 Diesel Range Organics (Over		MSD	1010 <i>Limits</i>	726.4	F1	mg/Kg		61	70 - 130	17	20

Client: Vertex

Project/Site: JRV DI 1A CTB

QC Sample Results

Job ID: 890-6025-1 SDG: 23E - 04616

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71672/1-A									Client S	ample ID:		
Matrix: Solid										Prep	Type: S	oluble
Analysis Batch: 71748												
	_	MB MB	-				_	_				
Analyte		esult Quali	ner		Unit		D	Pr	repared	Analyz		Dil Fac
Chloride	<	5.00 U		5.00	mg/K	.g				01/31/24 :	20:45	1
Lab Sample ID: LCS 880-71672/2-A							Cli	ient	Sample	D: Lab Co	ontrol S	ample
Matrix: Solid											Type: S	
Analysis Batch: 71748												
· · · · · , · · · · · · · · · · · · · · · · · · ·			Spike	LCS	LCS					%Rec		
Analyte			Added	Result	Qualifier	Unit		D	%Rec	Limits		
Chloride			250	274.3		mg/Kg			110	90 - 110		
Lab Sample ID: LCSD 880-71672/3-A	•					CI	ient S	Sam	ple ID: I	Lab Contro		
Matrix: Solid										Prep	Type: S	olubl
Analysis Batch: 71748			Spike		LCSD					%Rec		RPI
					LCSD					%Rec		
			-					_				
			Added	Result	Qualifier	Unit		<u>D</u>	%Rec	Limits	RPD	Limi
			-			Unit mg/Kg		<u>D</u>	%Rec 109		RPD 1	Limi
Chloride			Added	Result				<u>D</u>	109	Limits 90 - 110	1	Limi 20
Chloride Lab Sample ID: 890-6024-A-1-B MS			Added	Result				<u>D</u>	109	Limits 90 - 110 Sample ID	1 : Matrix	Limi 20 Spike
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid			Added	Result				<u>D</u>	109	Limits 90 - 110 Sample ID	1	Limi 20 Spike
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid Analysis Batch: 71748	Sample	Sample	Added					<u>D</u>	109	Limits 90 - 110 Sample ID	1 : Matrix	Limi 20 Spike
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid Analysis Batch: 71748	•	Sample Qualifier	Added 250	Result 272.7 MS	Qualifier			D D	109	Limits 90 - 110 Sample ID Prep	1 : Matrix	Limi 20 Spike
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid Analysis Batch: 71748 Analyte	•	Qualifier	Added 250 Spike	Result 272.7 MS	Qualifier MS Qualifier	mg/Kg			109 Client	Limits 90 - 110 Sample ID Prep %Rec	1 : Matrix	Limi 20 Spike
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid Analysis Batch: 71748 Analyte Chloride	Result 181	Qualifier	Added 250 Spike Added	Result 272.7 MS Result	Qualifier MS Qualifier	mg/Kg		<u>D</u>	109 Client %Rec 120	Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110	1 : Matrix Type: S	Limi 2 Spike oluble
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid Analysis Batch: 71748 Analyte Chloride Lab Sample ID: 890-6024-A-1-C MSE	Result 181	Qualifier	Added 250 Spike Added	Result 272.7 MS Result	Qualifier MS Qualifier	mg/Kg	Clien	<u>D</u>	109 Client %Rec 120	Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	1 : Matrix Type: S 	Limi 20 Spike oluble
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid Analysis Batch: 71748 Analyte Chloride Lab Sample ID: 890-6024-A-1-C MSE Matrix: Solid	Result 181	Qualifier	Added 250 Spike Added	Result 272.7 MS Result	Qualifier MS Qualifier	mg/Kg	Clien	<u>D</u>	109 Client %Rec 120	Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	1 : Matrix Type: S	Limi 20 Spike oluble
Chloride Lab Sample ID: 890-6024-A-1-B MS Matrix: Solid Analysis Batch: 71748 Chloride Lab Sample ID: 890-6024-A-1-C MSE Matrix: Solid Analysis Batch: 71748	Result 181	Qualifier F1	Added 250 Spike Added 250	Result 272.7 MS 	Qualifier MS Qualifier F1	mg/Kg	Clien	<u>D</u>	109 Client %Rec 120	Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp Prep	1 : Matrix Type: S 	Limi 20 Spike oluble
Matrix: Solid Analysis Batch: 71748 Analyte Chloride Lab Sample ID: 890-6024-A-1-C MSE Matrix: Solid Analysis Batch: 71748	Result 181	Qualifier F1	Added 250 Spike Added	Result 272.7 MS Result 481.8	Qualifier MS Qualifier	mg/Kg	Clien	<u>D</u>	109 Client %Rec 120	Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 D: Matrix Sp	1 : Matrix Type: S 	Limi 20 Spike oluble

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QC Association Summary

Client: Vertex Project/Site: JRV DI 1A CTB

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Job ID: 890-6025-1 SDG: 23E - 04616

GC VOA

Prep Batch: 72103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6025-1	BG 24 - 01	Total/NA	Solid	5035	
890-6025-2	BG 24 - 01	Total/NA	Solid	5035	
890-6025-3	BG 24 - 01	Total/NA	Solid	5035	
MB 880-72103/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72103/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72103/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-38487-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-38487-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 72315

Lab Camala ID	Client Comple ID	Dren Turne	Matrix	Mathad	Dren Betch	
Analysis Batch: 72437						
880-38487-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72103	13
880-38487-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	72103	12
LCSD 880-72103/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72103	
LCS 880-72103/1-A	Lab Control Sample	Total/NA	Solid	8021B	72103	
MB 880-72103/5-A	Method Blank	Total/NA	Solid	8021B	72103	
890-6025-3	BG 24 - 01	Total/NA	Solid	8021B	72103	
890-6025-2	BG 24 - 01	Total/NA	Solid	8021B	72103	
890-6025-1	BG 24 - 01	Total/NA	Solid	8021B	72103	
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
Analysis Batch: 72315						9
880-38487-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		8
880-38487-A-1-E MS	Matrix Spike	Total/NA	Solid	5035		

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6025-1	BG 24 - 01	Total/NA	Solid	Total BTEX	
890-6025-2	BG 24 - 01	Total/NA	Solid	Total BTEX	
890-6025-3	BG 24 - 01	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 71752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6025-1	BG 24 - 01	Total/NA	Solid	8015NM Prep	
890-6025-2	BG 24 - 01	Total/NA	Solid	8015NM Prep	
890-6025-3	BG 24 - 01	Total/NA	Solid	8015NM Prep	
MB 880-71752/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-71752/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-71752/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6014-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6014-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 72446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6025-1	BG 24 - 01	Total/NA	Solid	8015B NM	71752
890-6025-2	BG 24 - 01	Total/NA	Solid	8015B NM	71752
890-6025-3	BG 24 - 01	Total/NA	Solid	8015B NM	71752
MB 880-71752/1-A	Method Blank	Total/NA	Solid	8015B NM	71752
LCS 880-71752/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	71752
LCSD 880-71752/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	71752
890-6014-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	71752
890-6014-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	71752

Received by OCD: 4/29/2024 11:25:14 AM

QC Association Summary

Client: Vertex Project/Site: JRV DI 1A CTB Page 123 of 326

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Job ID: 890-6025-1 SDG: 23E - 04616

GC Semi VOA

Analysis Batch: 72593

Lab Sample ID 890-6025-1	Client Sample ID BG 24 - 01	Prep Type Total/NA	Matrix Solid	Method 8015 NM	Prep Batch
890-6025-2	BG 24 - 01	Total/NA	Solid	8015 NM	
890-6025-3	BG 24 - 01	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 71672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	8
890-6025-1	BG 24 - 01	Soluble	Solid	DI Leach		
890-6025-2	BG 24 - 01	Soluble	Solid	DI Leach		O
890-6025-3	BG 24 - 01	Soluble	Solid	DI Leach		
MB 880-71672/1-A	Method Blank	Soluble	Solid	DI Leach		
LCS 880-71672/2-A	Lab Control Sample	Soluble	Solid	DI Leach		
LCSD 880-71672/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach		
890-6024-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach		
890-6024-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach		

Analysis Batch: 71748

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6025-1	BG 24 - 01	Soluble	Solid	300.0	71672
890-6025-2	BG 24 - 01	Soluble	Solid	300.0	71672
890-6025-3	BG 24 - 01	Soluble	Solid	300.0	71672
MB 880-71672/1-A	Method Blank	Soluble	Solid	300.0	71672
LCS 880-71672/2-A	Lab Control Sample	Soluble	Solid	300.0	71672
LCSD 880-71672/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71672
890-6024-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	71672
890-6024-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71672

Job ID: 890-6025-1 SDG: 23E - 04616

Lab Sample ID: 890-6025-1 Matrix: Solid

Lab Sample ID: 890-6025-2

Lab Sample ID: 890-6025-3

Matrix: Solid

Matrix: Solid

Date Collected: 01/23/24 12:00 Date Received: 01/24/24 11:02

Client Sample ID: BG 24 - 01

Project/Site: JRV DI 1A CTB

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 17:32	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72437	02/05/24 17:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			72593	02/06/24 20:42	SM	EET MID
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	71752	01/27/24 21:45	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72446	02/06/24 20:42	SM	EET MID
Soluble	Leach	DI Leach			5.03 g	50 mL	71672	01/26/24 09:00	SA	EET MID
Soluble	Analysis	300.0		5	50 mL	50 mL	71748	01/31/24 21:20	СН	EET MID

Client Sample ID: BG 24 - 01 Date Collected: 01/23/24 12:10

Date Received: 01/23/24 12:10

	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	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 17:52	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72437	02/05/24 17:52	SM	EET MID
Total/NA	Analysis	8015 NM		1			72593	02/06/24 21:03	SM	EET MID
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	71752	01/27/24 21:45	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72446	02/06/24 21:03	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	71672	01/26/24 09:00	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71748	01/31/24 21:24	СН	EET MID

Client Sample ID: BG 24 - 01 Date Collected: 01/23/24 12:20 Date Received: 01/24/24 11:02

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 18:12	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72437	02/05/24 18:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			72593	02/06/24 21:24	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	71752	01/27/24 21:45	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	72446	02/06/24 21:24	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	71672	01/26/24 09:00	SA	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	71748	01/31/24 21:29	CH	EET MID

Laboratory References:

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

Laboratory: Eurofins Midland

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

uthority	Program		Identification Number	Expiration Date
exas	NELAP		T104704400-23-26	06-30-24
The following analyti	as are included in this report, but the	laboratory is not certif	fied by the governing authority. This lis	t may include analytes
for which the agency	does not offer certification.	,	, , , , , , , , , , , , , , , , , , , ,	
0,	1 /	<u>Matrix</u> Solid	Analyte Total TPH	

Job ID: 890-6025-1

SDG: 23E - 04616

Eurofins Carlsbad

Method Summary

Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6025-1 SDG: 23E - 04616

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET MID
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe ASTM = A	rences: STM International		
EPA = US	Environmental Protection Agency		
SW846 = '	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Editi	on, November 1986 And Its Updates.	
TAL SOP :	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R			
EET MID :	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Laboratory References:

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6025-1 SDG: 23E - 04616

	Depth	Received	Collected	Matrix	Client Sample ID	Lab Sample ID
	0'	01/24/24 11:02	01/23/24 12:00	Solid	BG 24 - 01	890-6025-1
	2'	01/24/24 11:02	01/23/24 12:10	Solid	BG 24 - 01	890-6025-2
	4'	01/24/24 11:02	01/23/24 12:20	Solid	BG 24 - 01	890-6025-3
1						
1						

www.xenco.com Work Order Comm Project: ng: Level II Level III PST/L his is Level II Level III PST/L his his his his his his his his his his	CUTOTINS Environment Testing Xenco	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	2
ng: Level III _ Level III _ PST/UST] TRRP biles: EDD _ ADaPT _ Other: Preservative _ None: NO _ None: NO _ None: NO _ Cool: Cool _ HCL: HC _ H, PO _ d; HP _ NaHSO _ d; NABIS _ Na, S, O_0; NaSO _ d; NaSO	1/1/	gernth grun	www.xenco.com Page o Work Order Comments I: UST/PST PRP Brownfields RRC
Preservative Preservative Nome: NO Nome: NO Cool: Cool H ₃ PO 4; HP NaHSO 4; NaSO 3 NaHH 4500 NaH 400	ALA ALA		evel IILevel IIIPST/USTTRRP EDDADaPTOther:
Mone: NO Cool: Cool HCL:HC H,SO.a;H, H,P,PO.a; HP NaHSO.a; NABIS Na,S,Og; NASO Acetate+NaOH; NaCH+AccorbicAcit NaCH+Ac	-OM616 BROUT	lsh Code	Preservative
All the second sec	DI 14 CIB	(0.9	0
liked.	act: Yes No N/A Correction Factor: Yes No N/A Correction Factor: S: Yes No N/A Temperature Reading: Corrected Temperature:	S BUNG	H ₃ PO ₄ ; HP NaHSO ₄ ; NABIS Na ₂ S ₅ O ₃ ; NaSO ₃ Zn Acetate+NaOH; Zn
di K Se Ag SiO ₂ Na Sr TI Sn Hg: 1631/245.1 / 7470 Bated.	Date Time	Carly # of 10	NaOH+Ascorbic Acid: SAPC
Is 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr TI Sn U V : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RcRa Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RcRa Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RcRa Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RcRa Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RcRa Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RcRa Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U Hg: 1631 / 245.1 / 7470 / 747 : 8RcRa Standauter termes and subcontractors. It assigns standard terms and conditions vioses or expenses incurred by the control is submitted to Eurofins Xenco, but not analyzed. These terms will be enforced untess previously negotiated. Date/Time Relinquished by: (Signature) Received by: (Signature) 4 4 6	1.33.	Comp	Sample Comments
lated. Received by: (Signature)	Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Circle Method(s) and Metal(s) to be analyzed TCLP / SPLI	exas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb I 010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo N	- ×
Ceceived by: (Signature) Date/Time Relinquished by: (Signature) Received by: (Signature) (Signature)	courrent and relinquishment of samples constitutes a valid purchase order if will be liable only for the cost of samples and shall not assume any responsit num charge of \$85.00 will be applied to each project and a charge of \$5 for .	client company to Eurofins Xenco, its affiliates and subcontractions. It assigns standard for any losses or expenses incurred by the client if such losses are due to circumstances sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced u	lated.
	B	Date/Time Relinquished by:(Sign	sceived by: (Signature)
		* 0	

second seco	R	Relinquished by (Signature)	Notice: Signature of this document and relinquishn of service. Eurofins Xenco will be liable only for the of Eurofins Xenco. A minimum charge of \$85.00 wi	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed		الم المالي المالية الم 	والمحاجز	10-4-01	0 - 40 24	N-DH OI	Sample Identification	Total Containers.	Sample Custody Seals. Yes No	Yes	SAMPLE RECEIVED Intact: Ves No-		er's Name:	Project Number 29C-UM	Project Name: SRU DJ	Phone:	e ZIP-	Address:		Project Manager ONOW		eurofins E	
	Kumk	G Deceived by: (Signature)	ment of samples constitutes a valid purchase order from e cost of samples and shall not assume any responsibility fill be applied to each project and a charge of \$5 for each	8RCR				4 01:51	10/:10	₹	Matrix Date Time Depth	Corrected Temp	N/A Temperature Reading: -5	N/A Correction Factor	Thermometer ID:		h	1010	1 A, CUB Turn Around	Email'		Address.	N/ tvo	Wixon		Environment Testing Xenco	
	walt hell	Date/Time Relinquis	Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85,00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco. Just not analyzed. These terms will be enforced unless previously nego	A 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu F TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn				A A A & C	2		th Come cont I V V C	Pt T		Par	amet D1	ers)	Ush Code			City, State ZIP.	iss.		Bill to: (if different) OWWW W WWW	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Chain of Custoqy Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 FI Paco TX (014) 56K-7443 Lubhook TX (806) 704-1706	Chain of Custody
		yy (Signature)	t assigns standard terms and conditions te to circumstances beyond the control will be enforced unless previously negotiated.	e Pb Mg Mn Mo Ni K Se Mo Ni Se Ag Tl U		890-6025														Deliverables EDD	Reporting Level II C Lev	<u>ਹ</u> ੇ	Program: UST/PST P		0000		
Revised Date: 08/25/2020 Rev. 2020.2		Received by: (Signature) Date/Time		Ag SiO ₂ Na Sr Tl Sn U V Zn Hg: 1631/245.1/7470/7471		890-6025 Chain of Custody					Sample Comments	NaOH+Ascorbic Acid. SAPC	Zn Acetate+NaOH Zn	Na 25 20 3. NaSO 3	NaHSO 4. NABIS	H ₂ SO ₄ . H ₂ NaOH Na		-	Preservative Codes	ADaPT Other	Reporting Level II C Level III PST/UST TRRP L Level IV			omments	www.xenco.com Page of	Work Order No: 1092151001	

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2/7/2024

Released to Imaging: 5/10/2024 11:00:40 AM

Job Number: 890-6025-1 SDG Number: 23E - 04616

List Source: Eurofins Carlsbad

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6025 List Number: 1 Creator: Bruns, Shannon

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

Job Number: 890-6025-1 SDG Number: 23E - 04616

List Source: Eurofins Midland

List Creation: 01/25/24 02:46 PM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6025 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/13/2024 3:59:52 PM

JOB DESCRIPTION

JRU DI 1A CTB 23E-04616

JOB NUMBER

890-6052-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/13/2024 3:59:52 PM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-6052-1 SDG: 23E-04616

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.

	Definitions/Glossary	
Client: Vertex	Job ID: 890-6052-	
Project/Site: JR	SDG: 23E-0461	6 2
Qualifiers		- 3
GC VOA		
Qualifier	Qualifier Description	4
*+	LCS and/or LCSD is outside acceptance limits, high biased.	_
S1-	Surrogate recovery exceeds control limits, low biased.	5
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	7
F2	MS/MSD RPD exceeds control limits	
S1+	Surrogate recovery exceeds control limits, high biased.	8
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		9
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	- 10
Glossary		-
Abbreviation	These commonly used abbreviations may or may not be present in this report.	- 111
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	- 10
%R	Percent Recovery	
CFL	Contains Free Liquid	4.5
CFU	Colony Forming Unit	13
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	

- MDC Minimum Detectable Concentration (Radiochemistry)
- Method Detection Limit MDL
- ML Minimum Level (Dioxin) MPN Most Probable Number
- MQL Method Quantitation Limit NC Not Calculated
 - Not Detected at the reporting limit (or MDL or EDL if shown)
- ND NEG Negative / Absent
- POS Positive / Present Practical Quantitation Limit PQL
- PRES Presumptive
- QC Quality Control
- RER Relative Error Ratio (Radiochemistry)
- RL Reporting Limit or Requested Limit (Radiochemistry)
- RPD Relative Percent Difference, a measure of the relative difference between two points
- TEF Toxicity Equivalent Factor (Dioxin)
- Toxicity Equivalent Quotient (Dioxin) TEQ
- TNTC Too Numerous To Count

Case Narrative

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Job ID: 890-6052-1

Job ID: 890-6052-1

Eurofins Carlsbad

Job Narrative 890-6052-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/29/2024 11:47 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 2.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BG24-02 (890-6052-1), BG24-02 (890-6052-2), BG24-02 (890-6052-3), BG24-02 (890-6052-4) and BG24-02 (890-6052-5).

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: BG24-02 (890-6052-1) and BG24-02 (890-6052-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-72103 and analytical batch 880-72315 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

Method 8021B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 880-72315 recovered outside control limits for the following analytes: MTBE.

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

GC Semi VOA

Method 8015MOD NM: Surrogate recovery for the following samples were outside the upper control limit: BG24-02 (890-6052-2), BG24-02 (890-6052-3), BG24-02 (890-6052-4) and BG24-02 (890-6052-5). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside the upper control limit: BG24-02 (890-6052-1). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

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

Eurofins Carlsbad

Job ID: 890-6052-1 SDG: 23E-04616

Matrix: Solid

5

Lab Sample ID: 890-6052-1

Client Sample ID: BG24-02

Date Collected: 01/23/24 12:30 Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		02/01/24 10:19	02/05/24 18:33	,
Toluene	<0.00199	U	0.00199	mg/Kg		02/01/24 10:19	02/05/24 18:33	
Ethylbenzene	<0.00199	U *+	0.00199	mg/Kg		02/01/24 10:19	02/05/24 18:33	
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	mg/Kg		02/01/24 10:19	02/05/24 18:33	
p-Xylene	<0.00199	U *+	0.00199	mg/Kg		02/01/24 10:19	02/05/24 18:33	
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg		02/01/24 10:19	02/05/24 18:33	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	99		70 - 130			02/01/24 10:19	02/05/24 18:33	
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130			02/01/24 10:19	02/05/24 18:33	
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/05/24 18:33	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (0	GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.8	U	49.8	mg/Kg			02/13/24 14:50	
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)	<49.8	U	49.8	mg/Kg		01/30/24 14:46	02/13/24 14:50	
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		01/30/24 14:46	02/13/24 14:50	
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/30/24 14:46	02/13/24 14:50	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
p-Terphenyl	173	S1+	70 - 130			01/30/24 14:46	02/13/24 14:50	
1-Chlorooctane	157	S1+	70 - 130			01/30/24 14:46	02/13/24 14:50	
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	71.3		4.98	mg/Kg			02/04/24 05:13	
lient Sample ID: BG24-02						Lab Sar	nple ID: 890-	6052-:
ate Collected: 01/23/24 12:40 ate Received: 01/29/24 11:47							Matri	x: Soli
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00199		0.00199	mg/Kg		02/01/24 10:19	02/05/24 18:53	
Toluene	<0.00199		0.00199	mg/Kg		02/01/24 10:19	02/05/24 18:53	
Ethylbenzene	< 0.00199		0.00199	mg/Kg		02/01/24 10:19	02/05/24 18:53	
n-Xylene & p-Xylene	< 0.00398		0.00398	mg/Kg		02/01/24 10:19	02/05/24 18:53	
	-0.00030	. .	0.00000			32/01/24 10.13	52,00,24 10.00	

o-Xylene	<0.00199	U *+	0.00199	mg/Kg	02/01/24 10:19	02/05/24 18:53	1
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg	02/01/24 10:19	02/05/24 18:53	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)	% <i>Recovery</i> 86	Qualifier	Limits 70 - 130		Prepared 02/01/24 10:19	Analyzed 02/05/24 18:53	Dil Fac

Released to Imaging: 5/10/2024 11:00:40 AM

2/13/2024

Client Sample Results

Job ID: 890-6052-1 SDG: 23E-04616

Client Sample ID: BG24-02

Date Collected: 01/23/24 12:40 Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/05/24 18:53	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			02/13/24 00:17	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.6	U	49.6	mg/Kg		01/30/24 14:46	02/13/24 00:17	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/30/24 14:46	02/13/24 00:17	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/30/24 14:46	02/13/24 00:17	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	179	S1+	70 - 130			01/30/24 14:46	02/13/24 00:17	1
1-Chlorooctane	165	S1+	70 - 130			01/30/24 14:46	02/13/24 00:17	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	57.5		5.00	mg/Kg			02/04/24 05:20	1
lient Sample ID: BG24-02						Lab Car	nple ID: 890-	

Date Received: 01/29/24 11:47

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:14	1
Ethylbenzene	<0.00200	U *+	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:14	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	mg/Kg		02/01/24 10:19	02/05/24 19:14	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:14	1
Xylenes, Total	<0.00399	U *+	0.00399	mg/Kg		02/01/24 10:19	02/05/24 19:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		70 - 130			02/01/24 10:19	02/05/24 19:14	1
1,4-Difluorobenzene (Surr)	71		70 - 130			02/01/24 10:19	02/05/24 19:14	1
Method: TAL SOP Total BTEX	- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/05/24 19:14	1
- Method: SW846 8015 NM - Die	esel Range Organ	ics (DRO) (GC)					
		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result	Quaimer	INE I	Unit		ricpurcu	Analyzeu	Diriac

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.2	U	50.2	mg/Kg		01/30/24 14:46	02/13/24 00:38	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		01/30/24 14:46	02/13/24 00:38	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/30/24 14:46	02/13/24 00:38	1

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Lab Sample ID: 890-6052-2 Matrix: Solid 5 Client: Vertex

Client Sample Results

Job ID: 890-6052-1 SDG: 23E-04616

Project/Site: JRU DI 1A CTB							SDG: 231	
Client Sample ID: BG24-02						Lab San	nple ID: 890-	6052-3
Date Collected: 01/23/24 12:50							Matri	ix: Solid
Date Received: 01/29/24 11:47								
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
o-Terphenyl	183	S1+	70 - 130			01/30/24 14:46	02/13/24 00:38	
1-Chlorooctane	162	S1+	70 - 130			01/30/24 14:46	02/13/24 00:38	
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	le					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	52.3		5.02	mg/Kg			02/04/24 05:27	
lient Sample ID: BG24-02						Lab San	nple ID: 890-	6052-
Date Collected: 01/23/24 13:00							Matri	ix: Solie
Date Received: 01/29/24 11:47								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:34	
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:34	
Ethylbenzene	<0.00200	U *+	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:34	
m-Xylene & p-Xylene	<0.00401	U *+	0.00401	mg/Kg		02/01/24 10:19	02/05/24 19:34	
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		02/01/24 10:19	02/05/24 19:34	
Xylenes, Total	<0.00401	U *+	0.00401	mg/Kg		02/01/24 10:19	02/05/24 19:34	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	83		70 - 130			02/01/24 10:19	02/05/24 19:34	
1,4-Difluorobenzene (Surr)	69	S1-	70 - 130			02/01/24 10:19	02/05/24 19:34	
Method: TAL SOP Total BTEX - T	otal BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/05/24 19:34	
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.4	U	50.4	mg/Kg			02/13/24 00:59	
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)	<50.4	U	50.4	mg/Kg		01/30/24 14:46	02/13/24 00:59	
Diesel Range Organics (Over C10-C28)	<50.4	U	50.4	mg/Kg		01/30/24 14:46	02/13/24 00:59	
Oll Range Organics (Over C28-C36)	<50.4	U	50.4	mg/Kg		01/30/24 14:46	02/13/24 00:59	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
o-Terphenyl	220	S1+	70 - 130			01/30/24 14:46	02/13/24 00:59	
1-Chlorooctane	198	S1+	70 - 130			01/30/24 14:46	02/13/24 00:59	
Method: EPA 300.0 - Anions, Ion	Chromatogram	hy - Solubl	le					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
						-		

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Client Sample Results

Client: Vertex Project/Site: JRU DI 1A CTB

Client Sample ID: BG24-02

Date Collected: 01/23/24 13:10 Date Received: 01/29/24 11:47

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		02/01/24 10:19	02/05/24 19:55	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/01/24 10:19	02/05/24 19:55	1
Ethylbenzene	<0.00199	U *+	0.00199	mg/Kg		02/01/24 10:19	02/05/24 19:55	1
m-Xylene & p-Xylene	<0.00398	U *+	0.00398	mg/Kg		02/01/24 10:19	02/05/24 19:55	1
o-Xylene	<0.00199	U *+	0.00199	mg/Kg		02/01/24 10:19	02/05/24 19:55	1
Xylenes, Total	<0.00398	U *+	0.00398	mg/Kg		02/01/24 10:19	02/05/24 19:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		70 - 130			02/01/24 10:19	02/05/24 19:55	1
1,4-Difluorobenzene (Surr)	71		70 - 130			02/01/24 10:19	02/05/24 19:55	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/05/24 19:55	1
Method: SW846 8015 NM - Diese Analyte		ics (DRO) (Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			50.5	mg/Kg			02/13/24 01:19	1
Method: SW846 8015B NM - Dies	sel Range Orga	nice (DRO)	(60)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.5		50.5	mg/Kg		01/30/24 14:46	02/13/24 01:19	1
Diesel Range Organics (Over	<50.5		50.5	mg/Kg		01/30/24 14:46	02/13/24 01:19	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		01/30/24 14:46	02/13/24 01:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl		S1+	70 - 130			01/30/24 14:46	02/13/24 01:19	1
	172	S1+	70 - 130			01/30/24 14:46	02/13/24 01:19	1
1-Chlorooctane								
	Chromatogra	ohy - Solubl	e					
1-Chlorooctane Method: EPA 300.0 - Anions, Ion Analyte	• •	o <mark>hy - Solubl</mark> Qualifier	e RL	Unit	D	Prepared	Analyzed	Dil Fac

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Job ID: 890-6052-1 SDG: 23E-04616

Lab Sample ID: 890-6052-5

Matrix: Solid

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Released to Imaging: 5/10/2024 11:00:40 AM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

			Percent Surrogate Recovery (Acceptance Limits)	
	BFB1	DFBZ1		i
Lab Sample ID Client Samp	ble ID (70-130)	(70-130)		
880-38487-A-1-E MS Matrix Spike	119	100		
880-38487-A-1-F MSD Matrix Spike	Duplicate 120	98		
B90-6052-1 BG24-02	99	69 S1-		
B90-6052-2 BG24-02	86	76		
B90-6052-3 BG24-02	88	71		
B90-6052-4 BG24-02	83	69 S1-		
B90-6052-5 BG24-02	89	71		
LCS 880-72103/1-A Lab Control	Sample 130	97		
LCSD 880-72103/2-A Lab Control	Sample Dup 120	98		
MB 880-72103/5-A Method Blar	1k 76	77		
MB 880-72103/5-A Method Blar Surrogate Legend	ik /6	11		

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

		OTPH1	1CO1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-6044-A-1-G MS	Matrix Spike	87	88
890-6044-A-1-H MSD	Matrix Spike Duplicate	70	71
890-6052-1	BG24-02	173 S1+	157 S1+
890-6052-2	BG24-02	179 S1+	165 S1+
890-6052-3	BG24-02	183 S1+	162 S1+
890-6052-4	BG24-02	220 S1+	198 S1+
890-6052-5	BG24-02	193 S1+	172 S1+
LCS 870-17960/1-A	Lab Control Sample	114	123
LCSD 870-17960/2-A	Lab Control Sample Dup	110	118
MB 870-17960/3-A	Method Blank	108	101

Surrogate Legend

OTPH = o-Terphenyl

1CO = 1-Chlorooctane

Prep Type: Total/NA

Prep Type: Total/NA

QC Sample Results

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72103/	5-A

Matrix: Solid Analysis Batch: 72315

· · · · · · · · · · · · · · · · · · ·								
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/01/24 10:19	02/05/24 11:23	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130			02/01/24 10:19	02/05/24 11:23	1
1,4-Difluorobenzene (Surr)	77		70 - 130			02/01/24 10:19	02/05/24 11:23	1

Lab Sample ID: LCS 880-72103/1-A Matrix: Solid

Analysis Batch: 72315

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1115		mg/Kg		112	70 - 130	
Toluene	0.100	0.1061		mg/Kg		106	70 - 130	
Ethylbenzene	0.100	0.1479	*+	mg/Kg		148	70 - 130	
m-Xylene & p-Xylene	0.200	0.2897	*+	mg/Kg		145	70 - 130	
o-Xylene	0.100	0.1391	*+	mg/Kg		139	70 - 130	

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

Lab Sample ID: LCSD 880-72103/2-A

Matrix: Solid

Analysis Batch: 72315							Prep	Batch:	72103
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1090		mg/Kg		109	70 - 130	2	35
Toluene	0.100	0.1188		mg/Kg		119	70 - 130	11	35
Ethylbenzene	0.100	0.1481	*+	mg/Kg		148	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.2823	*+	mg/Kg		141	70 - 130	3	35
o-Xylene	0.100	0.1355	*+	mg/Kg		136	70 - 130	3	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	120		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-38487-A-1-E MS

Matrix: Solid

Analysis Batch: 72315									Prep	Batch: 72103
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0996	0.09519		mg/Kg		96	70 - 130	
Toluene	<0.00200	U	0.0996	0.1036		mg/Kg		104	70 - 130	

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Prep Type: Total/NA

Client Sample ID: Matrix Spike

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Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72103

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 72103

Lab Sample ID: 880-38487-A-1-E MS

QC Sample Results

MS MS

Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Result

0.1258

0.2439

0.1161

Spike

Added

0.0996

0.199

0.0996

Limits 70 - 130

70 - 130

70 - 130

Analysis Batch: 72315

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

o-Terphenyl

1-Chlorooctane

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

<0.00200

%Recovery

<0.00401 U*+

<0.00200 U*+

119

100

98

108

101

MS MS

Result Qualifier

U *+

Qualifier

Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 72103 7

Prep T	ype: To	tal/NA	
Prep	Batch:	72103	
ec		RPD	
its	RPD	Limit	
130	2	35	
130	2	35	

Client Sample ID: Ma	atrix Spike Duplicate
	Prep Type: Total/NA

Client Sample ID: Method Blank

02/03/24 17:12

02/03/24 17:12

Client Sample ID: Lab Control Sample

01/30/24 14:46

01/30/24 14:46

Prep Type: Total/NA

Prep Batch: 17960

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

126

122

117

D

Matrix: Solid Analysis Batch: 72315

Lab Sample ID: 880-38487-A-1-F MSD

Analysis Datch. 72313									гіер	Datch.	12105	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00200	U	0.0994	0.09331		mg/Kg		94	70 - 130	2	35	
Toluene	<0.00200	U	0.0994	0.1018		mg/Kg		102	70 - 130	2	35	i
Ethylbenzene	<0.00200	U *+	0.0994	0.1232		mg/Kg		124	70 - 130	2	35	
m-Xylene & p-Xylene	<0.00401	U *+	0.199	0.2377		mg/Kg		120	70 - 130	3	35	i
o-Xylene	<0.00200	U *+	0.0994	0.1135		mg/Kg		114	70 - 130	2	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	120		70 - 130									

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

Lab Sample ID: MB 870-17960/3-A Matrix: Solid Analysis Batch: 17706

	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		01/30/24 14:46	02/03/24 17:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/30/24 14:46	02/03/24 17:12	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/30/24 14:46	02/03/24 17:12	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

70 - 130

70 - 130

-	
Lab Sample ID: LCS 870-17960/1-A	
Matrix: Solid	

Matrix: Solid Analysis Batch: 17988								Type: Total/NA Batch: 17960
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)	1020	1171		mg/Kg		115	70 - 130	
Diesel Range Organics (Over	1010	1092		mg/Kg		108	70 - 130	
C10-C28)								

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QC Sample Results

Client: Vertex Project/Site: JRU DI 1A CTB

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

Lab Sample ID: LCS 870-179	60/1-A						Client	Sample	ID: Lab Co	ontrol Sa	ample
Matrix: Solid									Prep T	ype: To	tal/N/
Analysis Batch: 17988									Prep	Batch:	1796
	LCS	LCS									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	114		70 - 130								
1-Chlorooctane	123		70 - 130								
	120		/01/00								
Lab Sample ID: LCSD 870-17	960/2-A					Clie	nt Sam	ple ID: I	_ab Contro	I Sampl	e Du
Matrix: Solid										· ype: Tot	
Analysis Batch: 17988										Batch:	
			Spike	LCSD	LCSD				%Rec		RPI
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)			1020	1106		mg/Kg		109	70 - 130	6	2
Diesel Range Organics (Over			1010	1163		mg/Kg		115	70 - 130	6	2
C10-C28)						5 5					
	1000	LCSD									
0			1								
Surrogate	% Recovery	Qualifier	Limits 70 - 130								
o-Terphenyl											
1-Chlorooctane	118		70 - 130								
Lab Sample ID: 890-6044-A-1	-G MS							Client	Sample ID	· Matrix	Snik
Matrix: Solid										ype: To	
Analysis Batch: 17706										Batch:	
Analysis Baton. 11700	Sample	Sample	Spike	MS	MS				%Rec	Baten.	1750
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)	<49.8		1020	652.6		mg/Kg	— <u>-</u>	64	70 - 130		
Diesel Range Organics (Over		F1 F2	1010	889.9		mg/Kg		78	70 - 130		
C10-C28)			1010	000.0		ingrig		10	10-100		
	MS	MS									
Surrogate	%Recovery		Limits								
o-Terphenyl	87	Quaimer	70 - 130								
1-Chlorooctane	88		70 - 130								
			10-100								
Lab Sample ID: 890-6044-A-1	-H MSD					CI	ient Sa	ample ID	: Matrix Sp	oike Dup	olicate
Matrix: Solid										· ype: Tot	
Analysis Batch: 17706										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPI
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)	<49.8		1020	608.6		mg/Kg		60	70 - 130	7	2
Diesel Range Organics (Over C10-C28)		F1 F2	1010		F1 F2	mg/Kg		61	70 - 130	21	2
	MSD	MSD									
•	%Recovery	Qualifier	Limits								
Surrogate											
Surrogate o-Terphenyl	- <u></u>		70 - 130								
Client: Vertex

Project/Site: JRU DI 1A CTB

QC Sample Results

Job ID: 890-6052-1 SDG: 23E-04616

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71972/1-A								Clien	t Sample I	D: Metho	d Blank
Matrix: Solid									Pr	ep Type:	Soluble
Analysis Batch: 72255											
		MB MB									
Analyte		esult Qualifier	r	RL	Unit		D	Prepare		alyzed	Dil Fac
Chloride	<	<5.00 U		5.00	mg/k	Κg			02/04	/24 03:31	1
Lab Sample ID: LCS 880-71972/2-A							Clie	ent Sam	ple ID: Lat	o Control	Sample
Matrix: Solid									Pr	ep Type:	Soluble
Analysis Batch: 72255											
			Spike	LCS	LCS				%Rec		
Analyte			Added		Qualifier	Unit		D %Re			. <u> </u>
Chloride			250	259.7		mg/Kg		10	4 90 - 11	0	
Lab Sample ID: LCSD 880-71972/3-	A					CI	ient S	ample II	D: Lab Cor	ntrol Sam	ole Dup
Matrix: Solid									Pr	ep Type:	Soluble
Analysis Batch: 72255											
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit		D %Re	c Limits	RPD	Limit
Chloride			250	258.3		mg/Kg		10	3 90 - 11	0 1	20
Lab Sample ID: 890-6052-3 MS									Client Sar	nple ID: B	G24-02
Matrix: Solid									Pr	ep Type:	Soluble
Analysis Batch: 72255											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit		D %Re	c Limits		
Chloride	52.3		251	316.9		mg/Kg		10	5 90 - 11	0	
Lab Sample ID: 890-6052-3 MSD									Client Sar	nple ID: B	G24-02
Matrix: Solid										ep Type: ∜	
Analysis Batch: 72255											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit		D %Re	c Limits	RPD	Limit

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QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB

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Job ID: 890-6052-1 SDG: 23E-04616

GC VOA

Prep Batch: 72103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-6052-1	BG24-02	Total/NA	Solid	5035	
890-6052-2	BG24-02	Total/NA	Solid	5035	
890-6052-3	BG24-02	Total/NA	Solid	5035	
890-6052-4	BG24-02	Total/NA	Solid	5035	
890-6052-5	BG24-02	Total/NA	Solid	5035	
MB 880-72103/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72103/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72103/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-38487-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-38487-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 72315

Lab Control Sample	Iotal/NA	Solid	5035		
Lab Control Sample Dup	Total/NA	Solid	5035		8
Matrix Spike	Total/NA	Solid	5035		
Matrix Spike Duplicate	Total/NA	Solid	5035		9
					10
Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
BG24-02	Total/NA	Solid	8021B	72103	
BG24-02	Total/NA	Solid	8021B	72103	
BG24-02	Total/NA	Solid	8021B	72103	
BG24-02	Total/NA	Solid	8021B	72103	
BG24-02	Total/NA	Solid	8021B	72103	40
Method Blank	Total/NA	Solid	8021B	72103	13
Lab Control Sample	Total/NA	Solid	8021B	72103	
Lab Control Sample Dup	Total/NA	Solid	8021B	72103	
Matrix Spike	Total/NA	Solid	8021B	72103	
Matrix Spike Duplicate	Total/NA	Solid	8021B	72103	
	Lab Control Sample Dup Matrix Spike Matrix Spike Duplicate Client Sample ID BG24-02 BG24-02 BG24-02 BG24-02 BG24-02 BG24-02 Method Blank Lab Control Sample Lab Control Sample Dup Matrix Spike	Lab Control Sample DupTotal/NAMatrix SpikeTotal/NAMatrix Spike DuplicateTotal/NAMatrix Spike DuplicateTotal/NAEdient Sample IDPrep TypeBG24-02Total/NABG24-02Total/NABG24-02Total/NABG24-02Total/NABG24-02Total/NABG24-02Total/NABG24-02Total/NALab Control SampleTotal/NALab Control Sample DupTotal/NAMatrix SpikeTotal/NA	Lab Control Sample DupTotal/NASolidMatrix SpikeTotal/NASolidMatrix Spike DuplicateTotal/NASolidClient Sample IDPrep TypeMatrixBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidLab Control SampleTotal/NASolidLab Control Sample DupTotal/NASolidMatrix SpikeTotal/NASolid	Lab Control Sample DupTotal/NASolid5035Matrix SpikeTotal/NASolid5035Matrix Spike DuplicateTotal/NASolid5035Client Sample IDPrep TypeMatrixMethodBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BBG24-02Total/NASolid8021BMethod BlankTotal/NASolid8021BLab Control Sample DupTotal/NASolid8021BMatrix SpikeTotal/NASolid8021B	Lab Control Sample DupTotal/NASolid5035Matrix SpikeTotal/NASolid5035Matrix Spike DuplicateTotal/NASolid5035Client Sample IDPrep TypeMatrixMethodPrep BatchBG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103BG24-02Total/NASolid8021B72103Lab Control SampleTotal/NASolid8021B72103Lab Control Sample DupTotal/NASolid8021B72103Matrix SpikeTotal/NASolid8021B72103

Analysis Batch: 72509

Client Sample ID	Prep Type	Matrix	Method	Prep Batch
BG24-02	Total/NA	Solid	Total BTEX	
BG24-02	Total/NA	Solid	Total BTEX	
BG24-02	Total/NA	Solid	Total BTEX	
BG24-02	Total/NA	Solid	Total BTEX	
BG24-02	Total/NA	Solid	Total BTEX	
	BG24-02 BG24-02 BG24-02 BG24-02	BG24-02Total/NABG24-02Total/NABG24-02Total/NABG24-02Total/NA	BG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolidBG24-02Total/NASolid	BG24-02 Total/NA Solid Total BTEX BG24-02 Total/NA Solid Total BTEX

GC Semi VOA

Analysis Batch: 17706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 870-17960/3-A	Method Blank	Total/NA	Solid	8015B NM	17960
890-6044-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	17960
890-6044-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17960
Prep Batch: 17960					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6052-1	BG24-02	Total/NA	Solid	8015NM Prep	
890-6052-2	BG24-02	Total/NA	Solid	8015NM Prep	
890-6052-3	BG24-02	Total/NA	Solid	8015NM Prep	
890-6052-4	BG24-02	Total/NA	Solid	8015NM Prep	
890-6052-5	BG24-02	Total/NA	Solid	8015NM Prep	
MB 870-17960/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17960/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17960/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6044-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	

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Client: Vertex Project/Site: JRU DI 1A CTB

GC Semi VOA (Continued)

Prep Batch: 17960 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6044-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 17988					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6052-1	BG24-02	Total/NA	Solid	8015B NM	17960
890-6052-2	BG24-02	Total/NA	Solid	8015B NM	17960
890-6052-3	BG24-02	Total/NA	Solid	8015B NM	17960
890-6052-4	BG24-02	Total/NA	Solid	8015B NM	17960
890-6052-5	BG24-02	Total/NA	Solid	8015B NM	17960
LCS 870-17960/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17960
LCSD 870-17960/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17960
- Analysis Batch: 18038	l i				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6052-1	BG24-02	Total/NA	Solid	8015 NM	
890-6052-2	BG24-02	Total/NA	Solid	8015 NM	
890-6052-3	BG24-02	Total/NA	Solid	8015 NM	
890-6052-4	BG24-02	Total/NA	Solid	8015 NM	

Total/NA

Solid

8015 NM

HPLC/IC

890-6052-5

Leach Batch: 71972

BG24-02

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6052-1	BG24-02	Soluble	Solid	DI Leach	
890-6052-2	BG24-02	Soluble	Solid	DI Leach	
890-6052-3	BG24-02	Soluble	Solid	DI Leach	
890-6052-4	BG24-02	Soluble	Solid	DI Leach	
890-6052-5	BG24-02	Soluble	Solid	DI Leach	
MB 880-71972/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71972/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6052-3 MS	BG24-02	Soluble	Solid	DI Leach	
890-6052-3 MSD	BG24-02	Soluble	Solid	DI Leach	

Analysis Batch: 72255

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6052-1	BG24-02	Soluble	Solid	300.0	71972
890-6052-2	BG24-02	Soluble	Solid	300.0	71972
890-6052-3	BG24-02	Soluble	Solid	300.0	71972
890-6052-4	BG24-02	Soluble	Solid	300.0	71972
890-6052-5	BG24-02	Soluble	Solid	300.0	71972
MB 880-71972/1-A	Method Blank	Soluble	Solid	300.0	71972
LCS 880-71972/2-A	Lab Control Sample	Soluble	Solid	300.0	71972
LCSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71972
890-6052-3 MS	BG24-02	Soluble	Solid	300.0	71972
890-6052-3 MSD	BG24-02	Soluble	Solid	300.0	71972

Job ID: 890-6052-1

SDG: 23E-04616

Job ID: 890-6052-1 SDG: 23E-04616

Lab Sample ID: 890-6052-1 Matrix: Solid

Lab Sample ID: 890-6052-2

Lab Sample ID: 890-6052-3

Lab Sample ID: 890-6052-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/23/24 12:30 Date Received: 01/29/24 11:47

Client Sample ID: BG24-02

Project/Site: JRU DI 1A CTB

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 18:33	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72509	02/05/24 18:33	SM	EET MID
Total/NA	Analysis	8015 NM		1			18038	02/13/24 14:50	СС	EET DAL
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	17960	01/30/24 14:46	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 14:50	WP	EET DAL
Soluble	Leach	DI Leach			5.02 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		1			72255	02/04/24 05:13	СН	EET MID

Client Sample ID: BG24-02

Date Collected: 01/23/24 12:40

Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 18:53	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72509	02/05/24 18:53	SM	EET MID
Total/NA	Analysis	8015 NM		1			18038	02/13/24 00:17	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	17960	01/30/24 14:46	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 00:17	WP	EET DAL
Soluble	Leach	DI Leach			5.00 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		1			72255	02/04/24 05:20	СН	EET MID

Client Sample ID: BG24-02 Date Collected: 01/23/24 12:50

Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 19:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72509	02/05/24 19:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			18038	02/13/24 00:38	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	17960	01/30/24 14:46	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 00:38	WP	EET DAL
Soluble	Leach	DI Leach			4.98 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		1			72255	02/04/24 05:27	CH	EET MID

Client Sample ID: BG24-02 Date Collected: 01/23/24 13:00 Date Received: 01/29/24 11:47

	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	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 19:34	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72509	02/05/24 19:34	SM	EET MID

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> 10 11 12

Matrix: Solid

Job ID: 890-6052-1

Lab Sample ID: 890-6052-4

SDG: 23E-04616

Matrix: Solid

Lab Chronicle

Client: Vertex Project/Site: JRU DI 1A CTB

Client Sample ID: BG24-02

Date Collected: 01/23/24 13:00 Date Received: 01/29/24 11:47

	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			18038	02/13/24 00:59	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	17960	01/30/24 14:46	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 00:59	WP	EET DAL
Soluble	Leach	DI Leach			5.03 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		10			72255	02/04/24 05:47	СН	EET MID

Client Sample ID: BG24-02 Date Collected: 01/23/24 13:10

Date Received: 01/29/24 11:47

	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	72103	02/01/24 10:19	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72315	02/05/24 19:55	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72509	02/05/24 19:55	SM	EET MID
Total/NA	Analysis	8015 NM		1			18038	02/13/24 01:19	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	17960	01/30/24 14:46	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 01:19	WP	EET DAL
Soluble	Leach	DI Leach			5.05 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		10			72255	02/04/24 05:54	СН	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Eurofins Carlsbad

Lab Sample ID: 890-6052-5 Matrix: Solid

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Accreditation/Certification Summary

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6052-1 SDG: 23E-04616

Laboratory: Eurofins Dallas

Authority	Program	Identification Number	Expiration Date	
Texas	NELAP	T104704295-23-34	06-30-24	
aboratory: Eurofins	Midland			
Inloss otherwise noted, all enable	as for this laboratory wars sovered under each a	acroditation/acrtification balow		
ess otherwise noted, all analyt	es for this laboratory were covered under each a	ccreditation/certification below.		
nless otherwise noted, all analyt - Authority	es for this laboratory were covered under each a Program	ccreditation/certification below.	Expiration Date	

Laboratory: Eurofins Midland

Authority	P	rogram	Identification Number	Expiration Date
exas	N	ELAP	T104704400-23-26	06-30-24
The following analy	as are included in this rend	rt, but the laboratory is not certi	fied by the governing authority. This li	et may include analyte
ι,			fied by the governing authority. This li	st may include analyte
ι,	es are included in this repo does not offer certificatior		fied by the governing authority. This lis	st may include analyte
ι,			fied by the governing authority. This lis	st may include analyte

Eurofins Carlsbad

Method Summary

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6052-1 SDG: 23E-04616

Method	Method Description	Protocol	Laboratory
3021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
3015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
3015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
3015NM Prep	Microextraction	SW846	EET DAL
OI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe	erences:		
ASTM = A	STM International		
EPA = US	Environmental Protection Agency		
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Ed	ition, November 1986 And Its Updates.	
TAL SOP	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences:		
	= Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300		
EET MID :	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Laboratory References:

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6052-1 SDG: 23E-04616

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-6052-1	BG24-02	Solid	01/23/24 12:30	01/29/24 11:47
890-6052-2	BG24-02	Solid	01/23/24 12:40	01/29/24 11:47
890-6052-3	BG24-02	Solid	01/23/24 12:50	01/29/24 11:47
890-6052-4	BG24-02	Solid	01/23/24 13:00	01/29/24 11:47
890-6052-5	BG24-02	Solid	01/23/24 13:10	01/29/24 11:47

<form></form>	eurofins Environment Testing		Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334	Work Order No:	Work Order No: 1082 15 1001
Work Stripper Papel Project: UST/PST Papel Project: Level II _ Level Des: EDD	venco	EL Paso, TX (Hobbs, NM ((915) 585-3443, Lubbock, TX (806) 794-1296 (575) 392-7550, Carlsbad, NM (575) 988-3199		Y . /
: UST/PST PRP Project: g: Level II Level bles: EDD C	Chance La	Bill to: (if	th Or	Work (ments
Project: g: Level II les: EDD	y Name: WHYPK IX	Company Name:	n ATO U	T/PST PRP	nfields RC Superfund
EDD	e ZIP:	Address: City, State ZIP:	you put	State of Project: Reporting: Level II Level III P.	
liked.		Email:		EDD	Other:
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Received by: (Signature)	336-04616	Boutine Rush			Vone: NO DI Water: H ₂ O
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Zn Aceta NaOHLAA San San San San NaOHLAA San San San San San San San San San San	Yes No N/A	2.0-	×		la 25 203: NaSO 3
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All K Se Ag SiO ₂ Na Sr TI Sn U Hg: 1631/245.1/7470 /7 Received by: (Signature)	mple Identification Matrix	Sampled Depth Comp	+		Sample Comments
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Ali K Se Ag SiO ₂ Na Sr Tl Sn U Hg: 1631/245.1/7470 /7 Hg: 1631/245.1/7470 /7 hated. Received by: (Signature)		/			
li K Se Ag SiO ₂ Na Sr TI Sn U Hg: 1631/245.1/7470 /7 hated. Received by: (Signature)					
Hated. Received by; (Signature)	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	8RCRA 13PPM Texas 11 AI Sb TCLP/SPLP 6010 : 8RCRA SI	As Ba Be B Cd Cr Co Cu Fe Pb Mg b As Ba Be Cd Cr Co Cu Pb Mn Mo Ni S	<u> </u> J Mn Mo Ni K Se Ag SiO ₂ Na Sr T Se Ag Ti U Hg: 1631/245.1/7	Sn U V Zn 470 /7471
Received by: (Signature)	Notice: Signature of this document and relinquishment of samples constitutes i of service. Eurofins Xenco will be liable only for the cost of samples and shall nc of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project	a valid purchase order from client company to Eurofi ot assume any responsibility for any losses or expense t and a chartee of \$5 for each sample submitted to Eur	ins Xenco, its affiliates and subcontractors. It assigns standard term es incurred by the client if such losses are due to circumstances be indiaty Shanco, hits not standards Thana terms will be noticed.	ms and conditions syond the control	
Balantore Bauns 1129 1147 manual manual	Relinquished by: (Signature)	l by: (Signature)	Date/Time Relinguished by: (Signatu	nate	Data/Timo
	hour of &	11/1	9 1147		
		2	4		
			9	11 11	

Received by OCD: 4/29/2024 11:25:14 AM

	Date/Time:		Urefs) ^o C and Other Remarks	Received by:	Rec	Company	6 6 0		Date/Time:	ITELYEY als Intact Custody Seal No.:	Relinquished by: Custody Seals Intact
	_		FedE	Received by: Received by:	Rec	Company Company	>		Date/Time:		Relinquished by: Relinquished by:
	ment:	Method of Shipment:			Time:			Date:		inquished by:	Empty Kit Relinquished by
		ents:	ns/QC Requirements	Special Instructions/	Special		2	rable Rank:	Primary Deliverable Rank: 2	Deliverable Requested: I, II, III, IV, Other (specify)	Deliverable Rec
nger than 1 month) r Months	may be assessed if samples are retained longer than	assessed if samp	l (A fee may be	Sample Disposal (A fee	Sampl					Possible Hazard Identification	Possible Haza
istructions will be provided ins Environment Testing S	LC laboratory or other in said compliance to Eurof	of Custody attesting to s	rofins Environment 1 n the signed Chain	to date, return	are current	and accreditations	ices the ownershing analyzed, the s ily. If all requester	entral, LLC pla ssts/matrix beir tion immediate	orment, resting sourn or ed above for analysis/te outh Central, LLC atten	Note: Since laboratory accreditation is the State of Origin listed above for analysis/test/mark being analyzed, the samples must be shipped back by induced and the State of Origin listed above for analysis/test/mark being analyzed, the samples must be shipped back by for analysis being analyzed. The samples must be shipped back by for analysis of the State of Origin listed above for analysis/test/mark being analyzed, the samples must be shipped back by for analysis being analyzed. The samples must be shipped back by for analysis being analyzed, the samples must be shipped back by for analysis being analyzed. The samples must be shipped back by for analysis being analyzed accreditation in the Eurofine Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofine Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofine Environment Testing South Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofine Environment Testing South Central, LLC.	Note: Since laborat laboratory does not to accreditation stat LLC.
forwarded under chain-of	This sample shipment is	hoostract laboratories									
	1			×	×	Solid		13:10 Mountain	1/23/24	0-6052-5)	BG24-02 (890-6052-5)
	-			×	×	Solid		13:00 Mountain	1/23/24	0-6052-4)	BG24-02 (890-6052-4)
				×	×	Solid		12:50 Mountain	1/23/24	0-6052-3)	BG24-02 (890-6052-3)
	-			×	×	Solid		12:40 Mountain	1/23/24	0-6052-2)	BG24-02 (890-6052-2)
				×	×	Solid		12:30 Mountain	1/23/24	0-6052-1)	BG24-02 (890-6052-1)
	X				X		CO L		X		
Special Instructions/Note:	Total Numbe			8015MOD_NM/	Perform MS/I 8015MOD_Cale	Matrix (W=water, S=solid, O=waste/oll, BT=Tissue, A=Air)	Sample Type (C=comp, G=grab)	Sample	Sample Date	Sample Identification - Client ID (Lab ID)	Sample Identif
	r of co			8015N	ISD (Same			SSOW#:		Site:
DA Z - other (specify)				M_S_F		ole No			Project #: 89000161	TB	Project Name: JRU DI 1A CTB
Water	_			rep		s or a			WO #		Email:
loid	G - A					0)			PO #	0(Tel)	Phone: 214-902-0300(Tel)
E - National Control C											State, Zip: TX, 75220
ate	B - NaOH C - Zn Acet							(days):	TAT Requested (days):		City: Dallas
on Cod	A - HO	Requested	Analysis Re					sted:	Due Date Requested: 2/2/2024	lines Blvd, ,	Address: 9701 Harry Hines Blvd
Job #: 890-6052-1	-068 # aof		See note):	Accreditations Required (See note): NELAP - Texas	Accreditation	7>				Company: Eurofins Environment Testing South Centr	Company: Eurofins Enviro
Page: Page 1 of 1	Page: Page	State of Origin: New Mexico	insus.com	E-Mail: Jessica.Kramer@et.eurofinsi	a.Kramer	E-Mail: Jessic			Phone:		Client Contact: Shipping/Receiving
COC No: 880-9089.1		Carrier Tracking No(s):		ш Ш	Lab PM: Kramer, Jessica	Lab PM: Krame			Sampler:	rmation (Sub Contract Lab)	Client Information
Environment Testing	ې د				score	tody Re	Chain of Custody Record	Chain		ida Ave (79701 704-5440	1211 W. Florida Ave Midland, TX 79701 Phone: 432-704-5440

Page 154 of 326



Login Sample Receipt Checklist

Client: Vertex

Login Number: 6052 List Number: 1 Creator: Lopez, Abraham

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Did not receive all required containers.
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	

Job Number: 890-6052-1 SDG Number: 23E-04616

List Source: Eurofins Carlsbad

Job Number: 890-6052-1 SDG Number: 23E-04616

List Source: Eurofins Dallas

Login Sample Receipt Checklist

Client: Vertex

<6mm (1/4").

Login Number: 6052 List Number: 3 Creator: Dabinett, lan

Login Number, 0052		List Source. Luronnis Dana	.3
List Number: 3		List Creation: 02/02/24 12:43 PM	™ 5
Creator: Dabinett, Ian			
Question	Answer	Comment	6
The cooler's custody seal, if present, is intact.	N/A		
Sample custody seals, if present, are intact.	N/A		
The cooler or samples do not appear to have been compromised or tampered with.	True		8
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		9
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.	False	COC not relinquished.	
Is the Field Sampler's name present on COC?	N/A		
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
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		

14

Job Number: 890-6052-1 SDG Number: 23E-04616

List Source: Eurofins Midland

List Creation: 01/30/24 10:34 AM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6052 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/13/2024 12:20:07 PM

JOB DESCRIPTION

JRV DI 1A CTB 23E - 04616

JOB NUMBER

890-6050-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notos and contact information.



Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/13/2024 12:20:07 PM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-6050-1 SDG: 23E - 04616

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	Definitions/Glossary		
Client: Vertex Project/Site: JR		Job ID: 890-6050-1 SDG: 23E - 04616	
Qualifiers			
GC VOA Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
	Indicates the analyte was analyzed for but not detected.		
Glossary Abbreviation	These commonly used abbreviations may or may not be present in this report.		
	Listed under the "D" column to designate that the result is reported on a dry weight basis		
° %R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		
MDA	Minimum Detectable Activity (Radiochemistry)		
MDC	Minimum Detectable Concentration (Radiochemistry)		
MDL	Method Detection Limit		
ML	Minimum Level (Dioxin)		
MPN	Most Probable Number		
MQL	Method Quantitation Limit		
NC	Not Calculated		
ND	Not Detected at the reporting limit (or MDL or EDL if shown)		
NEG	Negative / Absent		
POS	Positive / Present		
PQL	Practical Quantitation Limit		
PRES	Presumptive		
QC	Quality Control		
RER	Relative Error Ratio (Radiochemistry)		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RPD	Relative Percent Difference, a measure of the relative difference between two points		

TEF Toxicity Equivalent Factor (Dioxin)

TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Case Narrative

Job ID: 890-6050-1

Client: Vertex Project: JRV DI 1A CTB

Eurofins Carlsbad

Job ID: 890-6050-1

Job Narrative 890-6050-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/29/2024 11:47 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 2.0°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH 24 - 09 (890-6050-1), BH 24 - 10 (890-6050-2), BH 24 - 10 (890-6050-3), BH 24 - 11 (890-6050-4) and BH 24 - 12 (890-6050-5).

GC VOA

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 870-17961 and analytical batch 870-17988 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside the upper control limit: BH 24 - 09 (890-6050-1), BH 24 - 10 (890-6050-2), BH 24 - 10 (890-6050-3), BH 24 - 11 (890-6050-4), BH 24 - 12 (890-6050-5) and (890-6043-A-1-H). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-6043-A-1-I MS) and (890-6043-A-1-J MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

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

Eurofins Carlsbad

Job ID: 890-6050-1 SDG: 23E - 04616

Client Sample ID: BH 24 - 09

Date	Collected:	01/24/24	12:10
Date	Received:	01/29/24	11.47

Project/Site: JRV DI 1A CTB

Client: Vertex

Lab Sample ID: 890-6050-1

Matrix: Solid

-	5
-	
	8
;	9
-	
:	13
-	

Date Collected: 01/24/24 12:10	
Date Received: 01/29/24 11:47	
Sample Depth: 2'	
– Method: SW846 8021B - Volatile Organic Compounds (GC)

< 0.00201	U	0.00201	mg/Kg	_	02/01/24 10:42	02/05/24 17:19	1
	-	0.00201	iiig/itg		02/01/24 10.42	02/03/24 17.19	
<0.00201	U	0.00201	mg/Kg		02/01/24 10:42	02/05/24 17:19	1
<0.00201	U	0.00201	mg/Kg		02/01/24 10:42	02/05/24 17:19	1
<0.00402	U	0.00402	mg/Kg		02/01/24 10:42	02/05/24 17:19	1
<0.00201	U	0.00201	mg/Kg		02/01/24 10:42	02/05/24 17:19	1
<0.00402	U	0.00402	mg/Kg		02/01/24 10:42	02/05/24 17:19	1
%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
100		70 - 130			02/01/24 10:42	02/05/24 17:19	1
101		70 - 130			02/01/24 10:42	02/05/24 17:19	1
otal BTEX Calo	ulation						
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<0.00402	U	0.00402	mg/Kg			02/05/24 17:19	1
Range Organ	ics (DRO) (GC)					
Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
<50.0	U	50.0	mg/Kg			02/13/24 07:09	1
el Range Orga	nics (DRO)	(GC)					
		RL	Unit	D	Prepared	Analyzed	Dil Fac
<50.0	U	50.0	mg/Kg		01/30/24 14:51	02/13/24 07:09	1
<50.0	U	50.0	mg/Kg		01/30/24 14:51	02/13/24 07:09	1
<50.0	U	50.0	mg/Kg		01/30/24 14:51	02/13/24 07:09	1
~-							
- <u> </u>						-	Dil Fac
							1
181	S1+	70 - 130			01/30/24 14:51	02/13/24 07:09	1
	Qualifier			<u>D</u>	Prepared		Dil Fac
821		50.3	mg/Kg			02/04/24 03:51	10
					Lab San	nple ID: 890-	6050-2
						Matri	x: Solid
	 <0.00201 <0.00402 <0.00402 <0.00402 <li< td=""><td><0.00201</td> U <0.00402</li<>	<0.00201	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	<0.00201	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	<0.00201

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		02/01/24 10:42	02/05/24 17:40	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/01/24 10:42	02/05/24 17:40	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/01/24 10:42	02/05/24 17:40	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/01/24 10:42	02/05/24 17:40	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/01/24 10:42	02/05/24 17:40	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/01/24 10:42	02/05/24 17:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			02/01/24 10:42	02/05/24 17:40	1
1,4-Difluorobenzene (Surr)	109		70 - 130			02/01/24 10:42	02/05/24 17:40	1

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex

Client Sample Results

Job ID: 890-6050-1

							SDG: 23E	
lient Sample ID: BH 24 - 10						Lab San	nple ID: 890-	6050-2
ate Collected: 01/24/24 12:20							Matri	x: Solic
ate Received: 01/29/24 11:47								
ample Depth: 0								
Method: TAL SOP Total BTEX - Tota	al BTEX Calo	sulation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/05/24 17:40	1
Method: SW846 8015 NM - Diesel R								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			02/13/24 07:29	1
Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.9	U	49.9	mg/Kg		01/30/24 14:51	02/13/24 07:29	1
Diesel Range Organics (Over	<49.9	U	49.9	mg/Kg		01/30/24 14:51	02/13/24 07:29	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/30/24 14:51	02/13/24 07:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	201	S1+	70 - 130			01/30/24 14:51	02/13/24 07:29	1
1-Chlorooctane		S1+	70 - 130			01/30/24 14:51	02/13/24 07:29	1
-								
Method: EPA 300.0 - Anions, Ion Ch	nromatograp	hy - Solubl	e					
		Qualifier	RL	Unit	D	Prepared	Analyzed	
Analyte Chloride	Result 118	Qualifier	RL 4.99	Unit mg/Kg	D	Prepared	Analyzed 02/04/24 04:12	Dil Fac
Chloride		Qualifier			<u>D</u>		02/04/24 04:12	1
Chloride Client Sample ID: BH 24 - 10		Qualifier			<u>D</u>		02/04/24 04:12	1 6050-3
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30		Qualifier			<u> </u>		02/04/24 04:12	1 6050-3
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47		Qualifier			<u>D</u>		02/04/24 04:12	1 6050-3
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2'	118		4.99		<u>D</u>		02/04/24 04:12	1 6050-3
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Dample Depth: 2' Method: SW846 8021B - Volatile Org	118 ganic Comp	ounds (GC)	4.99	mg/Kg		Lab Sar	02/04/24 04:12 nple ID: 890- Matri	1 6050-3 x: Solid
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte	118 ganic Comp Result	<mark>ounds (GC</mark>) Qualifier	4.99	mg/Kg	D	Lab Sar	02/04/24 04:12 nple ID: 890- Matri Analyzed	6050-3 x: Solid
Chloride Chloride Client Sample ID: BH 24 - 10 late Collected: 01/24/24 12:30 late Received: 01/29/24 11:47 lample Depth: 2' Method: SW846 8021B - Volatile Or Analyte Benzene	118 ganic Comp Result <0.00199	ounds (GC) Qualifier U	4.99	mg/Kg		Lab San Prepared 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri <u>Analyzed</u> 02/05/24 18:00	6050-3 x: Solic
Chloride Client Sample ID: BH 24 - 10 Pate Collected: 01/24/24 12:30 Pate Received: 01/29/24 11:47 Pample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene	118 ganic Comp Result <0.00199 <0.00199	ounds (GC) Qualifier U U	4.99 	Unit mg/Kg mg/Kg mg/Kg		Lab San Prepared 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00	6050-3 x: Solid Dil Fac
Chloride Client Sample ID: BH 24 - 10 Pate Collected: 01/24/24 12:30 Pate Received: 01/29/24 11:47 Cample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene	118 ganic Comp Result <0.00199 <0.00199 <0.00199	ounds (GC) Qualifier U U U	4.99 RL 0.00199 0.00199 0.00199	mg/Kg Unit mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	6050-3 x: Solic
Chloride Client Sample ID: BH 24 - 10 pate Collected: 01/24/24 12:30 pate Received: 01/29/24 11:47 sample Depth: 2' Method: SW846 8021B - Volatile Or Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	118 ganic Comp Result <0.00199 <0.00199 <0.00199 <0.00398	ounds (GC) Qualifier U U U U	RL 0.00199 0.00199 0.00199 0.00199 0.00199 0.00398	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	6050-3 x: Solic
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	118 ganic Comp Result <0.00199 <0.00199 <0.00199	ounds (GC) Qualifier U U U U U	4.99 RL 0.00199 0.00199 0.00199	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid Dil Fac 1 1 1 1 1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	118 ganic Comp Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199	ounds (GC) Qualifier U U U U U	RL 0.00199 0.00199 0.00199 0.00199 0.00398 0.00199	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate	118 ganic Comp Result <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 %Recovery	ounds (GC) Qualifier U U U U U U U U U	4.99 RL 0.00199 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 Limits	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Gample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr)	118 ganic Comp Result <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 %Recovery 115	ounds (GC) Qualifier U U U U U U U U U	4.99 RL 0.00199 0.00199 0.00199 0.00398 0.00398 Limits 70 - 130	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate	118 ganic Comp Result <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 %Recovery	ounds (GC) Qualifier U U U U U U U U U	4.99 RL 0.00199 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 Limits	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	118 ganic Comp Result <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 <i>%Recovery</i> 115 116	ounds (GC) Qualifier U U U U U U Qualifier	4.99 RL 0.00199 0.00199 0.00199 0.00398 0.00398 Limits 70 - 130	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX - Total	ganic Comp Result <0.00199	Ounds (GC) Qualifier U U U U U U Qualifier	4.99 RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 0.00398 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	ganic Comp Result <0.00199	ounds (GC) Qualifier U U U U U Qualifier	4.99 RL 0.00199 0.00199 0.00199 0.00398 0.00398 Limits 70 - 130	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX - Tota Analyte	118 ganic Comp Result <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 <i>%Recovery</i> 115 116 al BTEX Calc Result	ounds (GC) Qualifier U U U U U Qualifier	RL 0.00199 0.00199 0.00199 0.00199 0.00398 0.00398 1.00398 1.00398 1.00398 1.00398 0.00199 0.00398 1.00	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00	Dil Fac
Chloride Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX - Tota Analyte Total BTEX Method: SW846 8015 NM - Diesel R	ganic Comp Result <0.00199	ounds (GC) Qualifier U U U U Qualifier U U culation Qualifier U	4.99 RL 0.00199 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	D	Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 Prepared 02/01/24	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chloride Chloride Chloride Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30 Date Received: 01/29/24 11:47 Sample Depth: 2' Method: SW846 8021B - Volatile Org Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX - Tota Analyte Total BTEX	ganic Comp Result <0.00199	ounds (GC) Qualifier U U U U Qualifier U u culation Qualifier U ics (DRO) (1 Qualifier	RL 0.00199 0.00199 0.00199 0.00398 0.00398 Limits 70 - 130 70 - 130 RL 0.00398	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42 02/01/24 10:42	02/04/24 04:12 nple ID: 890- Matri 02/05/24 18:00 02/05/24 18:00	1 6050-3 x: Solid 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)								
	Analyte	Result Qua	lifier RL	Unit	D	Prepared	Analyzed	Dil Fac
	Gasoline Range Organics (GRO)	<50.3 U	50.3	mg/Kg		01/30/24 14:51	02/13/24 07:50	1

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Released to Imaging: 5/10/2024 11:00:40 AM

Client Sample Results

Job ID: 890-6050-1 SDG: 23E - 04616

Lab Sample ID: 890-6050-3

Lab Sample ID: 890-6050-4

Client Sample ID: BH 24 - 10

Date Collected: 01/24/24 12:30

Project/Site: JRV DI 1A CTB

Date Received: 01/29/24 11:47

Client: Vertex

Sample Depth: 2'

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.3	U	50.3	mg/Kg		01/30/24 14:51	02/13/24 07:50	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		01/30/24 14:51	02/13/24 07:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	228	S1+	70 - 130			01/30/24 14:51	02/13/24 07:50	1
1-Chlorooctane	201	S1+	70 - 130			01/30/24 14:51	02/13/24 07:50	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Result Qualifier Unit Analyte RL D Prepared Analyzed 4.96 02/04/24 04:19 Chloride 92.4 mg/Kg

Client Sample ID: BH 24 - 11

Date Collected: 01/24/24 12:50

Date Received: 01/29/24 11:47 Sample Depth: 2'

Method: SW846 8021B - Volat	Method: SW846 8021B - Volatile Organic Compounds (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac		
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 18:20	1		
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 18:20	1		
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 18:20	1		
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/01/24 10:42	02/05/24 18:20	1		
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 18:20	1		
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/01/24 10:42	02/05/24 18:20	1		
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	117		70 - 130			02/01/24 10:42	02/05/24 18:20	1		
1,4-Difluorobenzene (Surr)	112		70 - 130			02/01/24 10:42	02/05/24 18:20	1		

Method: TAL SOP Total BTEX - Total BTEX Calculation									
	Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
l	Total BTEX	<0.00399	U	0.00399	mg/Kg			02/05/24 18:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			02/13/24 08:10	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.3	U	50.3	mg/Kg		01/30/24 14:51	02/13/24 08:10	1
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		01/30/24 14:51	02/13/24 08:10	1
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		01/30/24 14:51	02/13/24 08:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	194	S1+	70 - 130			01/30/24 14:51	02/13/24 08:10	1
1-Chlorooctane	165	S1+	70 - 130			01/30/24 14:51	02/13/24 08:10	1

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Matrix: Solid

Dil Fac

Matrix: Solid

1

		Clien	it Sample Re	sults				
Client: Vertex Project/Site: JRV DI 1A CTB							Job ID: 890 SDG: 23E	
Client Sample ID: BH 24 - 11 Date Collected: 01/24/24 12:50 Date Received: 01/29/24 11:47 Sample Depth: 2'						Lab Sar	nple ID: 890- Matri	6050-4 x: Solid
Method: EPA 300.0 - Anions, Ion C Analyte		o <mark>hy - Solub</mark> Qualifier	le RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	624		49.8	mg/Kg			02/04/24 04:25	10
Client Sample ID: BH 24 - 12 Date Collected: 01/24/24 13:10 Date Received: 01/29/24 11:47 Sample Depth: 2'						Lab Sar	nple ID: 890- Matri	6050-5 x: Solid
Method: SW846 8021B - Volatile O Analyte		ounds (GC Qualifier) RL	Unit	D	Prepared	Applyzod	Dil Fac
Benzene	<0.00201		0.00201	mg/Kg		02/01/24 10:42	Analyzed 02/05/24 18:41	
Toluene	<0.00201		0.00201	mg/Kg		02/01/24 10:42	02/05/24 18:41	1
Ethylbenzene	< 0.00201		0.00201	mg/Kg		02/01/24 10:42	02/05/24 18:41	1
m-Xylene & p-Xylene	< 0.00402		0.00402	mg/Kg		02/01/24 10:42	02/05/24 18:41	
o-Xylene	< 0.00201		0.00201	mg/Kg		02/01/24 10:42	02/05/24 18:41	1
Xylenes, Total	< 0.00402		0.00402	mg/Kg		02/01/24 10:42	02/05/24 18:41	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130			02/01/24 10:42	02/05/24 18:41	1
1,4-Difluorobenzene (Surr)	110		70 - 130			02/01/24 10:42	02/05/24 18:41	1
 Method: TAL SOP Total BTEX - Tot	al BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/05/24 18:41	1
Method: SW846 8015 NM - Diesel F Analyte		ics (DRO) (Qualifier	GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1	mg/Kg			02/13/24 08:31	1
Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.1	U	50.1	mg/Kg		01/30/24 14:51	02/13/24 08:31	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		01/30/24 14:51	02/13/24 08:31	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		01/30/24 14:51	02/13/24 08:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	201	S1+	70 - 130			01/30/24 14:51	02/13/24 08:31	1
1-Chlorooctane	171	S1+	70 - 130			01/30/24 14:51	02/13/24 08:31	1
Method: EPA 300.0 - Anions, Ion C								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	633		50.5	mg/Kg			02/04/24 04:32	10

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Job ID: 890-6050-1

Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

Percent Surrogate Recovery (Acceptance Limits) BFB1 DFBZ1 Client Sample ID (70-130) (70-130) Lab Sample ID 99 890-6042-A-1-C MS Matrix Spike 97 890-6042-A-1-D MSD Matrix Spike Duplicate 109 97 890-6050-1 BH 24 - 09 100 101 890-6050-2 BH 24 - 10 117 109 890-6050-3 BH 24 - 10 115 116 890-6050-4 BH 24 - 11 117 112 890-6050-5 BH 24 - 12 110 110 LCS 880-72114/1-A 107 94 Lab Control Sample LCSD 880-72114/2-A Lab Control Sample Dup 106 94 MB 880-72114/5-A Method Blank 129 120

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Μ	a	tri	X:	Sc	olid	l

				Percent Surrogate Recovery (Acceptance Limits)
		OTPH1	1CO1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-6043-A-1-I MS	Matrix Spike	157 S1+	154 S1+	
890-6043-A-1-J MSD	Matrix Spike Duplicate	158 S1+	157 S1+	
890-6050-1	BH 24 - 09	211 S1+	181 S1+	
890-6050-2	BH 24 - 10	201 S1+	174 S1+	
890-6050-3	BH 24 - 10	228 S1+	201 S1+	
890-6050-4	BH 24 - 11	194 S1+	165 S1+	
890-6050-5	BH 24 - 12	201 S1+	171 S1+	

Surrogate Legend

OTPH = o-Terphenyl

1CO = 1-Chlorooctane

Prep Type: Total/NA

Prep Type: Total/NA

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QC Sample Results

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sam	ple ID: MB 880-72114/5-A

Matrix: Solid Analysis Batch: 72316

-	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 11:58	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 11:58	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 11:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/01/24 10:42	02/05/24 11:58	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/01/24 10:42	02/05/24 11:58	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/01/24 10:42	02/05/24 11:58	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			02/01/24 10:42	02/05/24 11:58	1
1,4-Difluorobenzene (Surr)	120		70 - 130			02/01/24 10:42	02/05/24 11:58	1

Lab Sample ID: LCS 880-72114/1-A Matrix: Solid

Analysis Batch: 72316

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1004		mg/Kg		100	70 - 130	
Toluene	0.100	0.1048		mg/Kg		105	70 - 130	
Ethylbenzene	0.100	0.1151		mg/Kg		115	70 - 130	
m-Xylene & p-Xylene	0.200	0.2201		mg/Kg		110	70 - 130	
o-Xylene	0.100	0.1064		mg/Kg		106	70 - 130	

	LCS		
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: LCSD 880-72114/2-A

Matrix: Solid

Analysis Batch: 72316							Prep	Batch:	72114
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09665		mg/Kg		97	70 - 130	4	35
Toluene	0.100	0.1002		mg/Kg		100	70 - 130	4	35
Ethylbenzene	0.100	0.1084		mg/Kg		108	70 - 130	6	35
m-Xylene & p-Xylene	0.200	0.2192		mg/Kg		110	70 - 130	0	35
o-Xylene	0.100	0.1066		mg/Kg		107	70 - 130	0	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-6042-A-1-C MS

Matrix: Solid

Analysis Batch: 72316									Prep	Batch: 72114
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0996	0.09142		mg/Kg		92	70 - 130	
Toluene	<0.00200	U	0.0996	0.1006		mg/Kg		101	70 - 130	

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Prep Type: Total/NA

Client Sample ID: Matrix Spike

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 72114

Lab Sample ID: 890-6042-A-1-C MS

QC Sample Results

MS MS

0.1052

0.2076

0.09916

Result Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

Spike

Added

0.0996

0.199

0.0996

Limits 70 - 130

70 - 130

70 - 130

Project/Site: JRV DI 1A CTB

Analysis Batch: 72316

Matrix: Solid

Analyte

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

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

Sample Sample

<0.00200

<0.00401 U

<0.00200 U

%Recovery

Result Qualifier

U

MS MS

99

97

97

Qualifier

7

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

%Rec

Limits

70 - 130

70 - 130

70 - 130

%Rec

106

104

100

D

Matrix: Solid Analysis Batch: 72316

1,4-Difluorobenzene (Surr)

Lab Sample ID: 890-6042-A-1-D MSD

4-Bromofluorobenzene (Surr)

1,4-Difluorobenzene (Surr)

Analysis Batch: 72316								Prep	Prep Batch: 72114			
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Benzene	<0.00200	U	0.0990	0.09993		mg/Kg		101	70 - 130	9	35	
Toluene	<0.00200	U	0.0990	0.09497		mg/Kg		96	70 - 130	6	35	
Ethylbenzene	<0.00200	U	0.0990	0.1120		mg/Kg		113	70 - 130	6	35	
m-Xylene & p-Xylene	<0.00401	U	0.198	0.2214		mg/Kg		112	70 - 130	6	35	
o-Xylene	<0.00200	U	0.0990	0.1058		mg/Kg		107	70 - 130	7	35	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
4-Bromofluorobenzene (Surr)	109	-	70 - 130									

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

Lab Sample ID: 890-6043-A-1-I MS Matrix: Solid 47000 - 1

Analysis Batch: 1/988									Prep	Batch: 1	17961
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)	<49.9	U	1030	1084		mg/Kg		106	70 - 130		
Diesel Range Organics (Over	<49.9	U F1	1020	1658	F1	mg/Kg		160	70 - 130		
C10-C28)											

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	157	S1+	70 - 130
1-Chlorooctane	154	S1+	70 - 130

Lab Sample ID: 890-6043-A-1-J MSD Matrix: Solid Analysis Batch: 17988

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)	<49.9	U	1030	1151		mg/Kg		112	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1020	1675	F1	mg/Kg		161	70 - 130	1	20

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Client Sample ID: Matrix Spike Prep Type: Total/NA Prep Batch: 72114

Client Sample ID: Matrix Spike

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 17961

A 4 1 4 4 4

Job ID: 890-6050-1 SDG: 23E - 04616

Client: Vertex Project/Site: JRV DI 1A CTB

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

Lab Sample ID: 890-6043-A-1 Matrix: Solid	IMSD								Client	Sample	D: Mat		ike Dup ype: To	
Analysis Batch: 17988													Batch:	
Analysis Baten. 17000												TTCP	Batem.	1750
	MSD	MSD												
Surrogate	%Recovery	Qualif	ier	Limits	-									
o-Terphenyl	158	S1+		70 - 130										
1-Chlorooctane	157	S1+		70 - 130										
Method: 300.0 - Anions, Io	n Chromat	ogra	phy											
Lab Sample ID: MB 880-71972	'1-A									Clien	t Sampl	e ID: N	/lethod	Blan
Matrix: Solid													Type: S	
Analysis Batch: 72255														
-		MB N	ИВ											
Analyte	R	esult (Qualifier		RL		Unit	t	D	Prepare	d	Analyze	ed	Dil Fa
Chloride	<	<5.00 l	J		5.00		mg/	Kg				/04/24 0		
Lab Sample ID: LCS 880-71972									Clie	nt Sam	ple ID: L	ah Co	ntrol S	ampl
Matrix: Solid	1 2- A								Cile	int Sam	-		Type: S	
Analysis Batch: 72255														
				Spike		LCS	LCS				%R	ес		
Analyte				Added		Result	Qualifier	Unit	[D %Re	c Lim	its		
Chloride				250		259.7		mg/Kg		10	4 90 -	110		
Lab Sample ID: LCSD 880-719	72/3-A							CI	ient Sa	ample II	D: Lab C	ontrol	Sampl	le Dur
Matrix: Solid													Type: S	
Analysis Batch: 72255													.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
				Spike		LCSD	LCSD				%R	ec		RPI
Analyte				Added			Qualifier	Unit	[D %Re			RPD	Limi
Chloride				250		258.3		mg/Kg		10			1	2
Lab Sample ID: 890-6050-1 MS											lient Sa	molo I		24 - 0
Matrix: Solid													Type: S	
Analysis Batch: 72255												i i op	.,po. 0	orabi
Analysis Baten. 72200	Sample	Sampl	е	Spike		MS	MS				%R	ec		
Analyte	-	Qualif		Added		Result		Unit	г	D %Re				
Chloride	821			2520		3445		mg/Kg		10				
	_									~	lient O -			
Lab Sample ID: 890-6050-1 MS	U									C	lient Sa	-		
Matrix: Solid												гер	Type: S	σιαρι
Analysis Batch: 72255														
	. .	•		• •			1105							
	Sample			Spike		MSD	MSD		_		%R			
Analyte Chloride	•	Sampl Qualif		Spike Added 2520			MSD Qualifier	<mark>Unit</mark> mg/Kg		D %Re 10	c Lim	its	RPD	RPD Limi

QC Association Summary

Client: Vertex Project/Site: JRV DI 1A CTB

5

Job ID: 890-6050-1 SDG: 23E - 04616

GC VOA

Prep Batch: 72114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6050-1	BH 24 - 09	Total/NA	Solid	5035	
890-6050-2	BH 24 - 10	Total/NA	Solid	5035	
890-6050-3	BH 24 - 10	Total/NA	Solid	5035	
890-6050-4	BH 24 - 11	Total/NA	Solid	5035	
890-6050-5	BH 24 - 12	Total/NA	Solid	5035	
MB 880-72114/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72114/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72114/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6042-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-6042-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 72316

LCS 880-72114/1-A	Lab Control Sample	Iotal/INA	Solid	5035		
LCSD 880-72114/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		8
890-6042-A-1-C MS	Matrix Spike	Total/NA	Solid	5035		
890-6042-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		9
Analysis Batch: 72316						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-6050-1	BH 24 - 09	Total/NA	Solid	8021B	72114	
890-6050-2	BH 24 - 10	Total/NA	Solid	8021B	72114	
890-6050-3	BH 24 - 10	Total/NA	Solid	8021B	72114	
890-6050-4	BH 24 - 11	Total/NA	Solid	8021B	72114	
890-6050-5	BH 24 - 12	Total/NA	Solid	8021B	72114	
MB 880-72114/5-A	Method Blank	Total/NA	Solid	8021B	72114	13
LCS 880-72114/1-A	Lab Control Sample	Total/NA	Solid	8021B	72114	
LCSD 880-72114/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72114	
890-6042-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	72114	
890-6042-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72114	

Analysis Batch: 72519

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6050-1	BH 24 - 09	Total/NA	Solid	Total BTEX	
890-6050-2	BH 24 - 10	Total/NA	Solid	Total BTEX	
890-6050-3	BH 24 - 10	Total/NA	Solid	Total BTEX	
890-6050-4	BH 24 - 11	Total/NA	Solid	Total BTEX	
890-6050-5	BH 24 - 12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17961

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6050-1	BH 24 - 09	Total/NA	Solid	8015NM Prep	
890-6050-2	BH 24 - 10	Total/NA	Solid	8015NM Prep	
890-6050-3	BH 24 - 10	Total/NA	Solid	8015NM Prep	
890-6050-4	BH 24 - 11	Total/NA	Solid	8015NM Prep	
890-6050-5	BH 24 - 12	Total/NA	Solid	8015NM Prep	
890-6043-A-1-I MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6043-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17988

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6050-1	BH 24 - 09	Total/NA	Solid	8015B NM	17961
890-6050-2	BH 24 - 10	Total/NA	Solid	8015B NM	17961
890-6050-3	BH 24 - 10	Total/NA	Solid	8015B NM	17961
890-6050-4	BH 24 - 11	Total/NA	Solid	8015B NM	17961
890-6050-5	BH 24 - 12	Total/NA	Solid	8015B NM	17961

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GC Semi VOA (Continued)

Analysis Batch: 17988 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6043-A-1-I MS	Matrix Spike	Total/NA	Solid	8015B NM	17961
890-6043-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17961

Analysis Batch: 18041

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6050-1	BH 24 - 09	Total/NA	Solid	8015 NM	
890-6050-2	BH 24 - 10	Total/NA	Solid	8015 NM	
890-6050-3	BH 24 - 10	Total/NA	Solid	8015 NM	
890-6050-4	BH 24 - 11	Total/NA	Solid	8015 NM	
890-6050-5	BH 24 - 12	Total/NA	Solid	8015 NM	
-					

HPLC/IC

Leach Batch: 71972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6050-1	BH 24 - 09	Soluble	Solid	DI Leach	
890-6050-2	BH 24 - 10	Soluble	Solid	DI Leach	
890-6050-3	BH 24 - 10	Soluble	Solid	DI Leach	
890-6050-4	BH 24 - 11	Soluble	Solid	DI Leach	
890-6050-5	BH 24 - 12	Soluble	Solid	DI Leach	
MB 880-71972/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71972/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6050-1 MS	BH 24 - 09	Soluble	Solid	DI Leach	
890-6050-1 MSD	BH 24 - 09	Soluble	Solid	DI Leach	

Analysis Batch: 72255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6050-1	BH 24 - 09	Soluble	Solid	300.0	71972
890-6050-2	BH 24 - 10	Soluble	Solid	300.0	71972
890-6050-3	BH 24 - 10	Soluble	Solid	300.0	71972
890-6050-4	BH 24 - 11	Soluble	Solid	300.0	71972
890-6050-5	BH 24 - 12	Soluble	Solid	300.0	71972
MB 880-71972/1-A	Method Blank	Soluble	Solid	300.0	71972
LCS 880-71972/2-A	Lab Control Sample	Soluble	Solid	300.0	71972
LCSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71972
890-6050-1 MS	BH 24 - 09	Soluble	Solid	300.0	71972
890-6050-1 MSD	BH 24 - 09	Soluble	Solid	300.0	71972

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Job ID: 890-6050-1 SDG: 23E - 04616

Lab Sample ID: 890-6050-1 Matrix: Solid

Lab Sample ID: 890-6050-2

Lab Sample ID: 890-6050-3

Lab Sample ID: 890-6050-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/24/24 12:10 Date Received: 01/29/24 11:47

Client Sample ID: BH 24 - 09

Project/Site: JRV DI 1A CTB

Client: Vertex

	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	72114	02/01/24 10:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72316	02/05/24 17:19	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72519	02/05/24 17:19	SM	EET MID
Total/NA	Analysis	8015 NM		1			18041	02/13/24 07:09	СС	EET DAL
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	17961	01/30/24 14:51	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 07:09	WP	EET DAL
Soluble	Leach	DI Leach			4.97 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		10			72255	02/04/24 03:51	СН	EET MID

Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:20

Date Received: 01/29/24 11:47

	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	72114	02/01/24 10:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72316	02/05/24 17:40	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72519	02/05/24 17:40	SM	EET MID
Total/NA	Analysis	8015 NM		1			18041	02/13/24 07:29	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	17961	01/30/24 14:51	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 07:29	WP	EET DAL
Soluble	Leach	DI Leach			5.01 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		1			72255	02/04/24 04:12	СН	EET MID

Client Sample ID: BH 24 - 10 Date Collected: 01/24/24 12:30

Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72114	02/01/24 10:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72316	02/05/24 18:00	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72519	02/05/24 18:00	SM	EET MID
Total/NA	Analysis	8015 NM		1			18041	02/13/24 07:50	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.95 g	10 mL	17961	01/30/24 14:51	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 07:50	WP	EET DAL
Soluble	Leach	DI Leach			5.04 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		1			72255	02/04/24 04:19	СН	EET MID

Client Sample ID: BH 24 - 11 Date Collected: 01/24/24 12:50 Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72114	02/01/24 10:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72316	02/05/24 18:20	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72519	02/05/24 18:20	SM	EET MID

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> 9 10 11

13 14

Matrix: Solid

Job ID: 890-6050-1 SDG: 23E - 04616

Lab Sample ID: 890-6050-4 Matrix: Solid

Lab Sample ID: 890-6050-5

Matrix: Solid

Date Collected: 01/24/24 12:50 Date Received: 01/29/24 11:47

Client Sample ID: BH 24 - 11

Project/Site: JRV DI 1A CTB

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			18041	02/13/24 08:10	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	17961	01/30/24 14:51	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 08:10	WP	EET DAL
Soluble	Leach	DI Leach			5.02 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		10			72255	02/04/24 04:25	СН	EET MID

Client Sample ID: BH 24 - 12 Date Collected: 01/24/24 13:10 Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	72114	02/01/24 10:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72316	02/05/24 18:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72519	02/05/24 18:41	SM	EET MID
Total/NA	Analysis	8015 NM		1			18041	02/13/24 08:31	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	17961	01/30/24 14:51	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 08:31	WP	EET DAL
Soluble	Leach	DI Leach			4.95 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		10			72255	02/04/24 04:32	СН	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Eurofins Carlsbad

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5

8 9 10

Accreditation/Certification Summary

Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6050-1 SDG: 23E - 04616

Laboratory: Eurofins Dallas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704295-23-34	06-30-24
<u> </u>			

Laboratory: Eurofins Midland

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

uthority	Prog	am	Identification Number	Expiration Date
exas	NELA	P	T104704400-23-26	06-30-24
The following analy	s are included in this report, b	ut the laboratory is not certi	fied by the governing authority. This li	st may include analytes
0,	1 /	ut the laboratory is not certi	fied by the governing authority. This li	st may include analytes
0,	s are included in this report, b does not offer certification.	ut the laboratory is not certil	fied by the governing authority. This li	st may include analytes
0,	1 /	ut the laboratory is not certii Matrix	fied by the governing authority. This lis Analyte	st may include analytes

Eurofins Carlsbad

Method Summary

Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6050-1 SDG: 23E - 04616

Method	Method Description	Protocol	Laboratory	
8021B	Volatile Organic Compounds (GC)	SW846	EET MID	
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID	
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL	
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL	
300.0	Anions, Ion Chromatography	EPA	EET MID	
5035	Closed System Purge and Trap	SW846	EET MID	
8015NM Prep	Microextraction	SW846	EET DAL	
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID	
Protocol Refe	rences:			
ASTM = A	STM International			
EPA = US	Environmental Protection Agency			
SW846 = "	Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Editi	on, November 1986 And Its Updates.		
TAL SOP =	TestAmerica Laboratories, Standard Operating Procedure			

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex Project/Site: JRV DI 1A CTB

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-6050-1	BH 24 - 09	Solid	01/24/24 12:10	01/29/24 11:47	2'	
90-6050-2	BH 24 - 10	Solid	01/24/24 12:20	01/29/24 11:47	0	
90-6050-3	BH 24 - 10	Solid	01/24/24 12:30	01/29/24 11:47	2'	
90-6050-4	BH 24 - 11	Solid	01/24/24 12:50	01/29/24 11:47	2'	
90-6050-5	BH 24 - 12	Solid	01/24/24 13:10	01/29/24 11:47	2'	
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						1
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Samples Received Intact: Yes No. Thermometer ID: Thirm Difference: Sample Custody Seals: Yes No. Mathematication Mathemat	
Cooler Custody Seals: Yes No N/A Correction Factor: PO: 2 PO: 2 Sample Custody Seals: Yes No NA Temperature Reading: A: A PO: A Total Containers: Contracted Temperature: A: A A: A PO: A PO: A Total Containers: Contracted Temperature: A: A A: A PO: A PO: A Sample Identification Matrix Sampled Depth Grab Cont PO: A DH2H - DO Currected Temperature: A: D A: D A: D A: D DH2H - DO Currectad Temperature: A: D A: D A: D A: D DH2H - DO Currectad Temperature: A: D A: D A: D A: D DH2H - DO Currectad Temperature: A: D A: D A: D A: D DH2H - DO Currectad Temperature: A: D A: D A: D A: D DH2H - LD Currectad Temperature: A: D A: D A: D A: D DH2H - LD Currectad Temperature: A: D A: D A: D A: D DH2H - LD Currectad Temperature: A: D A: D A: D A: D DH2H - LD Currectad Temperatu	NaHSO 2: NABIS
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Note Contraction Matrix Date Time Carability to field Sample Identification Matrix Sampled Sampled Sampled DH2U OP Sampled Sampled Sampled DA Sampled Sampled Sampled	Zn Acetate+NaOH: Zn
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DH2H Of Set UL2U.2U N: 10 21 U 2 U DH2H IO I2:30 21 V 3 3 3 3 1	Sample Comments
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	Revised Date: 08/25/2020 Rev. 2020.2

Received by OCD: 4/29/2024 11:25:14 AM

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our 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 hipped 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 compliance to Eurofins Environment Testing South Central, the carreditation 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 compliance to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofine Environment Testing South Central, the sample should be brought to Eurofine Environment Testing South Central, the sample should be bro Project Name: JRV DI 1A CTB State, Zip: TX, 75220 BH 24 - 10 (890-6050-3) BH 24 - 09 (890-6050-1) Empty Kit Relinquished by: Deliverable Requested: I, II, III, IV, Other (specify) Possible Hazard Identification BH 24 - 12 (890-6050-5) BH 24 - 11 (890-6050-4) BH 24 - 10 (890-6050-2) Email 9701 Harry Hines Blvd, Midland, TX 79701 1211 W. Florida Ave **Eurofins Midland** Relinquished by Sample Identification - Client ID (Lab ID) 214-902-0300(Tel) Dallas Phone: 432-704-5440 elinquished by: elinquished by: Custody Seals Intact: urofins Environment Testing South Centr nconfirmed adress ent Contact: lient Information hipping/Receiving mpany Yes A No Custody Seal No. (Sub Contract Lab) Edex Date/Time: Project #: 89000161 Date/Time Primary Deliverable Rank: 2 Due Date Requested: 2/2/2024 Phone: WO # PO # TAT Requested (days): Sampler Sample Date SOW#: 1/24/24 1/24/24 1/24/24 1/24/24 1/24/24 Chain of Custody Record Date Mountain 12:50 Mountain 13:10 Mountain 12:20 Mountain Mountain 12:30 Sample 12:10 Time 022 G=grab) (C=comp Sample Preservation Code: Type Company BT=Tissue, A=Al Company Company (W=water, S=solid, Matrix 0=waste/oil, Solid Solid Solid Solid Solid E-Mail: Lab PM: Jessica.Kramer@et.eurofinsus.com Kramer, Jessica Time: Field Filtered Sample (Yes or No) **NELAP** - Texas ccreditations Required (See note): Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For Mont Perform MS/MSD (Yes or No) Special Instructions/QC Requirements Cooler Temperature(s) °C and Other Remarks: Received by Received by Received by × × × 8015MOD_Calc × × 8015MOD_NM/8015NM_S_Prep × × × × × Analysis Requested 6 State of Origin: New Mexico Carrier Tracking No(s): Method of Shipment ちでに Date/Time: _ **Total Number of containers** eurofins G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH Page: Page 1 of 1 COC No: 880-9089.1 Preservation Coc 890-6050-1 Other: 00 # Special Instructions/Note: 3 N les U - Acetone V - MCAA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 W - pH 4-5 Y - Trizma S - H2SO4 T - TSP Dodecahydrate Company Z - other (specify) Company **Environment Testing** Ver: 06/08/2021 Company Months

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Job Number: 890-6050-1 SDG Number: 23E - 04616

List Source: Eurofins Carlsbad

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6050 List Number: 1 Creator: Bruns, Shannon

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	N/A	Refer to Job Narrative for details.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Job Number: 890-6050-1 SDG Number: 23E - 04616

List Source: Eurofins Dallas

Login Sample Receipt Checklist

Client: Vertex

<6mm (1/4").

Login Number: 6050 List Number: 3 Creator: Dabinett, lan

Login Humber. ooo		Elst obulce: Euronno Bunac	·
List Number: 3		List Creation: 02/02/24 12:43 PM	¹ 5
Creator: Dabinett, Ian			
Question	Answer	Comment	6
The cooler's custody seal, if present, is intact.	N/A		
Sample custody seals, if present, are intact.	N/A		
The cooler or samples do not appear to have been compromised or tampered with.	True		8
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		9
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.	False	COC not relinquished.	
Is the Field Sampler's name present on COC?	N/A		
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
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		

Job Number: 890-6050-1 SDG Number: 23E - 04616

List Source: Eurofins Midland

List Creation: 01/30/24 01:43 PM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6050 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/12/2024 9:51:03 AM

JOB DESCRIPTION

JRV DI 1A CTB 23E - 04616

JOB NUMBER

890-6051-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/12/2024 9:51:03 AM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-6051-1 SDG: 23E - 04616

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QC Association Summary	16
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Certification Summary	19
Method Summary	20
Sample Summary	21
Chain of Custody	22
Receipt Checklists	25

Duplicate Error Ratio (normalized absolute difference)

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

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

Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

Dilution Factor

Detection Limit (DoD/DOE)

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present Practical Quantitation Limit

Presumptive

Quality Control

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

Method Quantitation Limit

Limit of Quantitation (DoD/DOE)

DER

DL

DLC

EDL

LOD

LOQ

MCL MDA

MDC MDL

ML

MPN

MQL

NC

ND

NEG POS

PQL PRES

QC

RL

RER

RPD

TEF

TEQ

TNTC

Dil Fac

DL, RA, RE, IN

	Demitions/Glossary		
Client: Vertex Project/Site: J	RV DI 1A CTB	Job ID: 890-6051-1 SDG: 23E - 04616	2
Qualifiers			3
GC VOA			
Qualifier	Qualifier Description		
*+	LCS and/or LCSD is outside acceptance limits, high biased.		_
S1+	Surrogate recovery exceeds control limits, high biased.		5
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA	N Contraction of the second		
Qualifier	Qualifier Description		
*1	LCS/LCSD RPD exceeds control limits.		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		8
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		9
HPLC/IC			
Qualifier	Qualifier Description		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		10
CFL	Contains Free Liquid		13
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		

Case Narrative

Job ID: 890-6051-1

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Job ID: 890-6051-1

Eurofins Carlsbad

Job Narrative 890-6051-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/29/2024 11:47 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 2.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH - 09 (890-6051-1), BH - 09 (890-6051-2) and BH - 10 (890-6051-3).

GC VOA

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-72529 recovered above the upper control limit for Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-72529/20).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-72529 recovered above the upper control limit for Ethylbenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-72529/33).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-72529 recovered above the upper control limit for Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-72529/51).

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-72529 recovered above the upper control limit for <AffectedAnalytes>. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 880-72529/64).

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-72388/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: The laboratory control sample (LCS) associated with preparation batch 880-72388 and analytical batch 880-72529 was outside acceptance criteria. Re-extraction and/or re-analysis could not be performed; therefore, the data have been reported. The batch matrix spike/matrix spike duplicate (MS/MSD) was within acceptance limits and may be used to evaluate matrix performance.

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 870-17905 and analytical batch 870-17969 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO).

Method 8015MOD_NM: Spike compounds were inadvertently omitted during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike duplicate recoveries are unavailable for preparation batch 870-17905 and analytical batch 870-17969. The associated laboratory control sample (LCS/LCSD) met acceptance criteria.

Method 8015MOD_NM: An incorrect volume of spiking solution was inadvertently added the following samples: (CCV

Case Narrative

Client: Vertex Project: JRV DI 1A CTB Job ID: 890-6051-1

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Job ID: 890-6051-1 (Continued) Eurofins Carlsbad

870-17969/164) and (CCV 870-17969/165). Percent recoveries are based on the amount spiked.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-6038-A-1-K MS) and (890-6038-A-1-L MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside the upper control limit: BH - 09 (890-6051-1), BH - 09 (890-6051-2), BH - 10 (890-6051-3) and (890-6038-A-1-J). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

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

Job ID: 890-6051-1 SDG: 23E - 04616

Client Sample ID: BH - 09

Project/Site: JRV DI 1A CTB

Date Collected: 01/25/24 10:00 Date Received: 01/29/24 11:47

Sample Depth: 0

Client: Vertex

Lab Sample ID: 890-6051-1

Matrix: Solid

Ethylbenzene								
	< 0.00201		0.00201	mg/Kg		02/05/24 14:05	02/08/24 06:12	1
Toluene	<0.00201		0.00201	mg/Kg		02/05/24 14:05	02/08/24 06:12	1
Benzene	<0.00201		0.00201	mg/Kg		02/05/24 14:05	02/08/24 06:12	1
Method: SW846 8021B - Volatile	• •	ounds (GC Qualifier) RL	Unit	D	Prepared	Analyzed	Dil Fac
ate Received: 01/29/24 11:47 ample Depth: 1'								
ate Collected: 01/25/24 10:10							Matri	x: Solid
lient Sample ID: BH - 09						Lab San	nple ID: 890-	
			20.2					
Analyte Chloride	Result 311	Quanner	RL 	mg/Kg	U	Frepareo	Analyzed 02/04/24 04:53	Dil Fac
Method: EPA 300.0 - Anions, Ion Analyte		hy - Solubl Qualifier	le RL	Unit	D	Prepared	Analyzed	Dil Fac
						01100/24 11.02	<i>U U U U U U U U U U U</i>	,
1-Chlorooctane		S1+	70 - 130 70 - 130			01/30/24 11:32	02/05/24 22:58	1
o-Terphenyl	% <i>Recovery</i>					01/30/24 11:32	02/05/24 22:58	DII Fac
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
C10-C28) Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/30/24 11:32	02/05/24 22:58	1
Diesel Range Organics (Over	<50.0	U	50.0	mg/Kg		01/30/24 11:32	02/05/24 22:58	1
Gasoline Range Organics (GRO)	<50.0		50.0	mg/Kg		01/30/24 11:32	02/05/24 22:58	1
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8015B NM - Dies	ol Pango Orgo			· ·				
Total TPH	- <u>- <50.0</u>		50.0	mg/Kg			02/05/24 22:58	1
Method: SW846 8015 NM - Diese Analyte		<mark>ics (DRO) (</mark> Qualifier	<mark>GC)</mark> RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/08/24 05:51	1
Analyte		Qualifier	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Method: TAL SOP Total BTEX - T	otal BTEX Calo	culation						
1,4-Difluorobenzene (Surr)	77		70 - 130			02/05/24 14:05	02/08/24 05:51	1
4-Bromofluorobenzene (Surr)	85		70 - 130			02/05/24 14:05	02/08/24 05:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Xylenes, Total	<0.00399	U *+	0.00399	mg/Kg		02/05/24 14:05	02/08/24 05:51	1
o-Xylene	<0.00200	U *+	0.00200	mg/Kg		02/05/24 14:05	02/08/24 05:51	1
m-Xylene & p-Xylene	<0.00399	U *+	0.00399	mg/Kg		02/05/24 14:05	02/08/24 05:51	1
Ethylbenzene	<0.00200	U *+	0.00200	mg/Kg		02/05/24 14:05	02/08/24 05:51	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/05/24 14:05	02/08/24 05:51	1
Benzene	< 0.00200	U	0.00200	mg/Kg		02/05/24 14:05	02/08/24 05:51	1
Denzene								

<0.00201 U*+ 0.00201 mg/Kg 02/05/24 14:05 02/08/24 06:12 Xylenes, Total <0.00402 U*+ 0.00402 02/05/24 14:05 02/08/24 06:12 mg/Kg %Recovery Surrogate Qualifier Limits Prepared Analyzed 4-Bromofluorobenzene (Surr) 89 70 - 130 02/05/24 14:05 02/08/24 06:12 1,4-Difluorobenzene (Surr) 73 70 - 130 02/05/24 14:05 02/08/24 06:12

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o-Xylene

1

1

1

1

Dil Fac

Client: Vertex

4 5

Client Sample Results

Job ID: 890-6051-1

lient Sample ID: BH - 09						Lab Sar	nple ID: 890-	6051-2
ate Collected: 01/25/24 10:10							Matri	ix: Solie
ate Received: 01/29/24 11:47								
ample Depth: 1'								
Method: TAL SOP Total BTEX - Tota	al BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/08/24 06:12	
Method: SW846 8015 NM - Diesel R	ange Organ	ics (DRO) (GC)					
Analyte		Qualifier	, RL	Unit	D	Prepared	Analyzed	Dil Fa
Fotal TPH	<49.5	U	49.5	mg/Kg			02/05/24 23:18	
Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)	<49.5		49.5	mg/Kg		01/30/24 11:32	02/05/24 23:18	
Diesel Range Organics (Over C10-C28)	<49.5	U	49.5	mg/Kg		01/30/24 11:32	02/05/24 23:18	
Oll Range Organics (Over C28-C36)	<49.5	U	49.5	mg/Kg		01/30/24 11:32	02/05/24 23:18	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
p-Terphenyl	144	S1+	70 - 130			01/30/24 11:32	02/05/24 23:18	
-Chlorooctane	128		70 - 130			01/30/24 11:32	02/05/24 23:18	
Method: EPA 300.0 - Anions, Ion Ch Analyte		Dhy - Solubl Qualifier	e RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	606		50.2	mg/Kg			02/04/24 04:59	1
liant Cample ID: DI 10						Lah Car		COE4
lient Sample ID: BH - 10						Lab Sar	nple ID: 890-	
ate Collected: 01/25/24 12:00 ate Received: 01/29/24 11:47							watri	ix: Soli
ample Depth: 1'								
Method: SW846 8021B - Volatile Org Analyte	• •	OUNDS (GC) Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200		0.00200	mg/Kg		02/05/24 14:05	02/08/24 06:32	
Toluene	<0.00200	U	0.00200			02/05/24 14:05	02/08/24 06:32	
				mg/Kg				
	< 0.00200		0.00200	mg/Kg		02/05/24 14:05	02/08/24 06:32	
n-Xylene & p-Xylene	<0.00401		0.00401	mg/Kg		02/05/24 14:05	02/08/24 06:32	
p-Xylene	< 0.00200	U *+	0.00200	mg/Kg		02/05/24 14:05	02/08/24 06:32	
(ylenes, Total	<0.00401	0 "+	0.00401	mg/Kg		02/05/24 14:05	02/08/24 06:32	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	91		70 - 130			02/05/24 14:05	02/08/24 06:32	
	73		70 - 130			02/05/24 14:05	02/08/24 06:32	
1,4-Difluorobenzene (Surr)								
	al BTEX Cal	culation						
1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX - Tota Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa

Total TPH	<50.2	U	50.2	mg/Kg			02/05/24 23:39	1
Method: SW846 8015B NM - Diesel	Range Orga	nics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.2	U *1	50.2	mg/Kg		01/30/24 11:32	02/05/24 23:39	1

RL

Unit

Prepared

D

Result Qualifier

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Analyzed

Released to Imaging: 5/10/2024 11:00:40 AM

Analyte

Dil Fac

Client Sample Results

Job ID: 890-6051-1 SDG: 23E - 04616

Client Sample ID: BH - 10

Project/Site: JRV DI 1A CTB

Date Collected: 01/25/24 12:00 Date Received: 01/29/24 11:47

Sample Depth: 1'

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.2	U	50.2	mg/Kg		01/30/24 11:32	02/05/24 23:39	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/30/24 11:32	02/05/24 23:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	146	S1+	70 - 130			01/30/24 11:32	02/05/24 23:39	1
1-Chlorooctane	131	S1+	70 - 130			01/30/24 11:32	02/05/24 23:39	1
- Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	150		5.01	mg/Kg			02/04/24 05:06	1

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Lab Sample ID: 890-6051-3 Matrix: Solid

Job ID: 890-6051-1 SDG: 23E - 04616

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)		5
890-6038-A-1-G MS	Matrix Spike	116	94		
890-6038-A-1-H MSD	Matrix Spike Duplicate	119	90		6
890-6051-1	BH - 09	85	77		
890-6051-2	BH - 09	89	73		
890-6051-3	BH - 10	91	73		
LCS 880-72388/1-A	Lab Control Sample	133 S1+	90		8
LCSD 880-72388/2-A	Lab Control Sample Dup	123	105		
MB 880-72368/5-A	Method Blank	75	78		0
MB 880-72388/5-A	Method Blank	76	77		3
Surrogate Legend					

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	1
		OTPH1	1CO1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
890-6038-A-1-K	MS Matrix Spike	139 S1+	127		
890-6038-A-1-L	MSD Matrix Spike Duplicate	146 S1+	128		
890-6051-1	BH - 09	197 S1+	177 S1+		
890-6051-2	BH - 09	144 S1+	128		
890-6051-3	BH - 10	146 S1+	131 S1+		
LCS 870-17905/*	1-A Lab Control Sample	125	108		
LCSD 870-17905	5/2-A Lab Control Sample Dup	126	112		
MB 870-17905/3	-A Method Blank	128	122		

Surrogate Legend

OTPH = o-Terphenyl

1CO = 1-Chlorooctane

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Prep Type: Total/NA

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72368/	'5-A							c	Client Sa	mple ID: Meth	od Blank
Matrix: Solid										Prep Type:	Total/NA
Analysis Batch: 72529										Prep Bato	
	MB	MB									
Analyte	Result	Qualifier	RL		Unit		D	Pre	epared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/K	g	_	02/05	/24 12:04	02/07/24 11:36	1
Toluene	<0.00200	U	0.00200		mg/K	g		02/05	/24 12:04	02/07/24 11:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/K	g		02/05	/24 12:04	02/07/24 11:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/K	g		02/05	/24 12:04	02/07/24 11:36	1
o-Xylene	<0.00200	U	0.00200		mg/K	g		02/05	/24 12:04	02/07/24 11:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/K	- g		02/05	/24 12:04	02/07/24 11:36	1
Summe meter	MB % Decenterry	MB	Limite					D	v - d	Analyzad	
Surrogate	%Recovery 	Qualifier	Limits						epared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130						/24 12:04	02/07/24 11:36	1
1,4-Difluorobenzene (Surr)	78		70 - 130					02/05	/24 12:04	02/07/24 11:36	1
Lab Sample ID: MB 880-72388/	5-A							c	Client Sa	mple ID: Meth	od Blank
Matrix: Solid										Prep Type:	
Analysis Batch: 72529										Prep Bate	
Analysis Daton. 72525	МВ	МВ									
Analyte	Result		RL		Unit		D	Dre	epared	Analyzed	Dil Fac
Benzene	<0.00200		0.00200				-		/24 14:05	02/07/24 23:01	1
Toluene			0.00200		-	-			/24 14:05	02/07/24 23:01	1
	<0.00200				mg/K	-			/24 14:05		1
Ethylbenzene	< 0.00200		0.00200		mg/K					02/07/24 23:01	1
m-Xylene & p-Xylene	< 0.00400		0.00400		mg/K				/24 14:05	02/07/24 23:01	1
o-Xylene	< 0.00200		0.00200		mg/K	-			/24 14:05	02/07/24 23:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/K	g		02/05	/24 14:05	02/07/24 23:01	1
	МВ	МВ									
Surrogate	%Recovery	Qualifier	Limits					Pre	epared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		70 - 130					02/05	/24 14:05	02/07/24 23:01	1
1,4-Difluorobenzene (Surr)	77		70 - 130					02/05	/24 14:05	02/07/24 23:01	1
_ 											
Lab Sample ID: LCS 880-72388	3/1-A						C	lient	Sample	ID: Lab Contro	
Matrix: Solid										Prep Type:	
Analysis Batch: 72529										Prep Bate	:h: 72388
			Spike	LCS	LCS					%Rec	
Analyte			Added	Result	Qualifier	Unit		_ D	%Rec	Limits	
Benzene			0.100	0.1175		mg/Kg			117	70 - 130	
Toluene			0.100	0.1154		mg/Kg			115	70 - 130	
Ethylbenzene			0.100	0.1542	*+	mg/Kg			154	70 - 130	
m-Xylene & p-Xylene			0.200	0.2975	*+	mg/Kg			149	70 - 130	
o-Xylene			0.100	0.1450	*+	mg/Kg			145	70 - 130	
	LCS LCS	•									
Surrogate	%Recovery Qua		Limits								
4-Bromofluorobenzene (Surr)	133 <u>S1+</u>		70 - 130								
1,4-Difluorobenzene (Surr)	90		70 - 130								
	50										
Lab Sample ID: LCSD 880-723	88/2-A					Cli	ent	Sam	ole ID: L	ab Control Sar	nple Dup
Matrix: Solid										Prep Type:	
Analysis Batch: 72529										Prep Bate	
			Spike	LCSD	LCSD					%Rec	RPD
Analyte			Added		Qualifier	Unit		D	%Rec	Limits RF	

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11

5

7

0.1052

mg/Kg

105

70 - 130

0.100

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

Lab Sample ID: LCSD 880-72 Matrix: Solid	2388/2-A					Clier	nt Sam	nple ID: I	Lab Contro Pren 1	I Sample Type: Tot	
Analysis Batch: 72529										Batch:	
Analysis Baten. 12020			Spike	LCSD	LCSD				%Rec	Baten.	RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
Toluene			0.100	0.1142		mg/Kg		114	70 - 130	<u> </u>	
Ethylbenzene			0.100	0.1353	*+	mg/Kg		135	70 - 130	13	3
m-Xylene & p-Xylene			0.200	0.2586		mg/Kg		129	70 - 130	14	35
o-Xylene			0.100	0.1265		mg/Kg		126	70 - 130	14	3
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	123		70 - 130								
1,4-Difluorobenzene (Surr)	105		70 - 130								
Lab Sample ID: 890-6038-A-	1-G MS							Client	Sample ID	· Matrix	Snike
Matrix: Solid								onone		Type: To	
Analysis Batch: 72529										Batch:	
· ····· , ··· · ·······················	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U	0.0996	0.08573		mg/Kg		86	70 - 130		
Toluene	<0.00200	U	0.0996	0.09654		mg/Kg		97	70 - 130		
Ethylbenzene	<0.00200	U *+	0.0996	0.1129		mg/Kg		113	70 - 130		
m-Xylene & p-Xylene	<0.00401	U *+	0.199	0.2151		mg/Kg		108	70 - 130		
e Vulene	<0.00200	U *+	0.0996	0.1044		mg/Kg		105	70 - 130		
o-Xylene	0.00200	0	0.0000	0.1011		mg/rtg		100	10 - 100		

	1///5	IVIS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	116		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 890-6038-A-1-H MSD Matrix: Solid Analysis Batch: 72529

Analysis Batch: 72529									Prep	Batch:	72388
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0990	0.08704		mg/Kg		88	70 - 130	2	35
Toluene	<0.00200	U	0.0990	0.09959		mg/Kg		101	70 - 130	3	35
Ethylbenzene	<0.00200	U *+	0.0990	0.1186		mg/Kg		120	70 - 130	5	35
m-Xylene & p-Xylene	<0.00401	U *+	0.198	0.2248		mg/Kg		114	70 - 130	4	35
o-Xylene	<0.00200	U *+	0.0990	0.1095		mg/Kg		111	70 - 130	5	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)			70 - 130								

1,4-Difluorobenzene (Surr)

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

90

Lab Sample ID: MB 870-17905/3-A Matrix: Solid Analysis Batch: 17969						Client Sa	mple ID: Metho Prep Type: ⊺ Prep Batcl	Total/NA
	MB	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		01/30/24 11:32	02/05/24 15:43	1

70 - 130

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Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Client: Vertex Project/Site: JRV DI 1A CTB

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

iethod: ou 150 MWI - Diese		gan			ontinu	cuj							
Lab Sample ID: MB 870-17905/	3-A									Client Sa	ample ID:		
Matrix: Solid												Type: To	
Analysis Batch: 17969											Prep	Batch:	17905
			MB										
Analyte			Qualifier	R		Unit		D		repared	Analyz		Dil Fac
Diesel Range Organics (Over 210-C28)	<	50.0	U	50	.0	mg/K	g		01/3	30/24 11:32	02/05/24	15:43	1
Oll Range Organics (Over C28-C36)	<	50.0	U	50	.0	mg/K	g		01/3	30/24 11:32	02/05/24	15:43	1
		ΜВ	МВ										
urrogate	%Reco	very	Qualifier	Limits					P	Prepared	Analyz	zed	Dil Fac
-Terphenyl		128		70 - 130					01/3	30/24 11:32	02/05/24	15:43	1
-Chlorooctane		122		70 - 130					01/3	30/24 11:32	02/05/24	15:43	1
ab Sample ID: LCS 870-17905	5/1- A							С	lient	t Sample	ID: Lab C	ontrol S	ample
Matrix: Solid											Prep 1	Гуре: То	otal/NA
Analysis Batch: 17969											Prep	Batch:	17905
-				Spike	LCS	LCS					%Rec		
nalyte				Added	Result	Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics (GRO)				1020	1174		mg/Kg			115	70 - 130		
liesel Range Organics (Over				1010	1217		mg/Kg			120	70 - 130		
10-C28)													
	LCS												
urrogate		Qual	ifier	Limits									
-Terphenyl	125			70 - 130									
-Chlorooctane	108			70 - 130									
ab Sample ID: LCSD 870-1790	05/2-A						Cli	ent	Sam	nple ID: L	ab Contro	ol Samp	le Dup
Matrix: Solid											Prep 1	Гуре: То	otal/NA
Analysis Batch: 17969											Prep	Batch:	17905
				Spike	LCSD	LCSD					%Rec		RPD
Analyte				Added	Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)				1020	906.0	*1	mg/Kg		_	89	70 - 130	26	20
Diesel Range Organics (Over C10-C28)				1010	1213		mg/Kg			120	70 - 130	0	20
/	LCSD	LCSI	כ										
Surrogate		Qual		Limits									
-Terphenyl	126			70 - 130									
I-Chlorooctane	112			70 - 130									
	=												
ab Sample ID: 890-6038-A-1-k	(MS									Client S	Sample ID	: Matrix	Spike
Aatrix: Solid												Гуре: То	-
Analysis Batch: 17969												Batch:	
	Sample	Sami	ole	Spike	MS	MS					%Rec		
Analyte	Result			Added		Qualifier	Unit		D	%Rec	Limits		
Gasoline Range Organics (GRO)	<49.9			1020	1169		mg/Kg			114	70 - 130		
case and the second control	0.0	5 1		1020	1103						100		

C10-C28)			
	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	139	S1+	70 - 130
1-Chlorooctane	127		70 - 130

55.5 F1 F2

2/12/2024

Released to Imaging: 5/10/2024 11:00:40 AM

Diesel Range Organics (Over

1010

1263

mg/Kg

119

70 - 130

Job ID: 890-6051-1 SDG: 23E - 04616

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

Lab Sample ID: 890-6038-A-1	-L MSD						Client S	ample II	D: Matrix S	-	-
Matrix: Solid										Гуре: То	
Analysis Batch: 17969									Prep	Batch:	17905
	Sample	Sample	Spike	MSI) MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Resul	t Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)	<49.9	U *1 F1	1020	<50.2	2 U F 1	mg/Kg		0	70 - 130	NC	20
Diesel Range Organics (Over C10-C28)	55.5	F1 F2	1010	<50.2	2 U F1 F2	mg/Kg		-2	70 - 130	190	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	146	S1+	70 - 130	-							
1-Chlorooctane	128		70 - 130								
lethod: 300.0 - Anions, l	on Chromat	ography									
Lab Sample ID: MB 880-7197	2/1-A							Client S	Sample ID:		
Matrix: Solid									Prep	Type: S	soluble
Analysis Batch: 72255											
		MB MB									
Analyte		esult Qualifier		RL	Unit		D	Prepared	Analyz		Dil Fac
Chloride	<	<5.00 U		5.00	mg/l	≺g			02/04/24	03:31	1
Lab Sample ID: LCS 880-719	72/2-A						Clien	t Sample	e ID: Lab C	ontrol S	ample
Matrix: Solid										Type: S	
Analysis Batch: 72255											
			Spike	LCS	S LCS				%Rec		
Analyte			Added	Resul	t Qualifier	Unit	D	%Rec	Limits		
Chloride			250	259.		mg/Kg		104	90 - 110		
Lab Sample ID: LCSD 880-71	972/2_1					CI	iont Sar		Lab Contro	Samp	
Matrix: Solid	512/J-A						ient Sai	inple iD.		Type: S	
									Fiep	Type. 3	oluble
Analysis Batch: 72255			Spike	1.00	LCSD				%Rec		RPD
Analista			Spike			11		0/ D = =			
Analyte			Added		t Qualifier	Unit	D	%Rec	Limits	RPD	
Chloride			250	258.3	b	mg/Kg		103	90 - 110	1	20
Lab Sample ID: 890-6050-A-1	-B MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72255											
-	Sample	Sample	Spike	MS	6 MS				%Rec		
Analyte	Result	Qualifier	Added	Resul	t Qualifier	Unit	D	%Rec	Limits		
			2520	344	5	mg/Kg		104	90 - 110		
Chloride	821										
							Client S	ample I). Matrix C.	aiko Duu	nlicato
Lab Sample ID: 890-6050-A-1							Client S	ample II	D: Matrix S		
Lab Sample ID: 890-6050-A-1 Matrix: Solid							Client S	ample II		oike Duj Type: S	
Lab Sample ID: 890-6050-A-1 Matrix: Solid	-C MSD	Sample	Spike	MSI) MSD		Client S	ample II			oluble
Chloride Lab Sample ID: 890-6050-A-1 Matrix: Solid Analysis Batch: 72255 Analyte	-C MSD Sample	Sample Qualifier) MSD t Qualifier	Unit	Client S	ample II	Prep		

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Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6051-1 SDG: 23E - 04616

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-6052	2-A-3-C MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72255											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	52.3		251	316.9		mg/Kg		105	90 - 110		
-	02.0		231	510.9		ilig/itg		100	00-110		
Lab Sample ID: 890-6052 Matrix: Solid Analysis Batch: 72255			231	310.9		0 0	ent Sa): Matrix Sp	pike Dup Type: S	
Lab Sample ID: 890-6052 Matrix: Solid	2-A-3-D MSD	Sample	Spike		MSD	0 0	ent Sa): Matrix Sp		
Lab Sample ID: 890-6052 Matrix: Solid	2-A-3-D MSD Sample	Sample Qualifier		MSD	MSD Qualifier	0 0	ent Sa D): Matrix Sp Prep		oluble

QC Association Summary

Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6051-1

Page 198 of 326

SDG: 23E - 04616

GC VOA

Prep Batch: 72368

Lab Sample ID MB 880-72368/5-A	Client Sample ID Method Blank	Prep Type Total/NA	Matrix Solid	Method 5035	Prep Batch
rep Batch: 72388					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6051-1	BH - 09	Total/NA	Solid	5035	
890-6051-2	BH - 09	Total/NA	Solid	5035	
890-6051-3	BH - 10	Total/NA	Solid	5035	
MB 880-72388/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72388/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72388/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6038-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-6038-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Lab Sample ID **Client Sample ID** Method Prep Batch Prep Type Matrix 890-6051-1 BH - 09 Total/NA Solid 8021B 72388 890-6051-2 BH - 09 Total/NA 8021B 72388 Solid 890-6051-3 BH - 10 Total/NA Solid 8021B 72388 MB 880-72368/5-A Total/NA Method Blank Solid 8021B 72368 Total/NA MB 880-72388/5-A Method Blank Solid 8021B 72388 LCS 880-72388/1-A Total/NA Solid 8021B Lab Control Sample 72388 LCSD 880-72388/2-A Lab Control Sample Dup Total/NA Solid 8021B 72388 Total/NA 890-6038-A-1-G MS Matrix Spike Solid 8021B 72388 890-6038-A-1-H MSD Matrix Spike Duplicate Total/NA Solid 8021B 72388

Analysis Batch: 72684

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6051-1	BH - 09	Total/NA	Solid	Total BTEX	
890-6051-2	BH - 09	Total/NA	Solid	Total BTEX	
890-6051-3	BH - 10	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6051-1	BH - 09	Total/NA	Solid	8015NM Prep	
890-6051-2	BH - 09	Total/NA	Solid	8015NM Prep	
890-6051-3	BH - 10	Total/NA	Solid	8015NM Prep	
MB 870-17905/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17905/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17905/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6038-A-1-K MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6038-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17969

Lab Sample ID 890-6051-1	Client Sample ID BH - 09	Prep Type Total/NA	Matrix	Method 8015B NM	Prep Batch
890-6051-2	BH - 09	Total/NA	Solid	8015B NM	17905
890-6051-3	BH - 10	Total/NA	Solid	8015B NM	17905
MB 870-17905/3-A	Method Blank	Total/NA	Solid	8015B NM	17905
LCS 870-17905/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17905

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Client: Vertex Project/Site: JRV DI 1A CTB

GC Semi VOA (Continued)

Analysis Batch: 17969 (Continued)

Lab Sample ID LCSD 870-17905/2-A	Client Sample ID Lab Control Sample Dup	Prep Type Total/NA	Matrix Solid	Method 8015B NM	Prep Batch 17905
890-6038-A-1-K MS	Matrix Spike	Total/NA	Solid	8015B NM	17905
890-6038-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17905
Analysis Batch: 17984					
I ah Samnle ID	Client Sample ID	Pren Tyne	Matrix	Method	Pron Batch

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6051-1	BH - 09	Total/NA	Solid	8015 NM	
890-6051-2	BH - 09	Total/NA	Solid	8015 NM	
890-6051-3	BH - 10	Total/NA	Solid	8015 NM	

HPLC/IC

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Leach Batch: 71972
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6051-1	BH - 09	Soluble	Solid	DI Leach	
890-6051-2	BH - 09	Soluble	Solid	DI Leach	
890-6051-3	BH - 10	Soluble	Solid	DI Leach	
MB 880-71972/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71972/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6050-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6050-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-6052-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6052-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 72255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6051-1	BH - 09	Soluble	Solid	300.0	71972
890-6051-2	BH - 09	Soluble	Solid	300.0	71972
890-6051-3	BH - 10	Soluble	Solid	300.0	71972
MB 880-71972/1-A	Method Blank	Soluble	Solid	300.0	71972
LCS 880-71972/2-A	Lab Control Sample	Soluble	Solid	300.0	71972
LCSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71972
890-6050-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	71972
890-6050-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71972
890-6052-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	71972
890-6052-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71972

Job ID: 890-6051-1 SDG: 23E - 04616

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Job ID: 890-6051-1 SDG: 23E - 04616

Lab Sample ID: 890-6051-1 Matrix: Solid

Date Collected: 01/25/24 10:00 Date Received: 01/29/24 11:47

Client Sample ID: BH - 09

Project/Site: JRV DI 1A CTB

Client: Vertex

	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	72388	02/05/24 14:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72529	02/08/24 05:51	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			72684	02/08/24 05:51	SM	EET MID
Total/NA	Analysis	8015 NM		1			17984	02/05/24 22:58	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	17905	01/30/24 11:32	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 22:58	WP	EET DAL
Soluble	Leach	DI Leach			4.96 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		5			72255	02/04/24 04:53	СН	EET MID

Lab Sample ID: 890-6051-2

Lab Sample ID: 890-6051-3

Matrix: Solid

Matrix: Solid

Date Collected: 01/25/24 10:10 Date Received: 01/29/24 11:47

Client Sample ID: BH - 09

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	72388	02/05/24 14:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72529	02/08/24 06:12	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			72684	02/08/24 06:12	SM	EET MID
Total/NA	Analysis	8015 NM		1			17984	02/05/24 23:18	СС	EET DAL
Total/NA	Prep	8015NM Prep			10.10 g	10 mL	17905	01/30/24 11:32	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 23:18	WP	EET DAL
Soluble	Leach	DI Leach			4.98 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		10			72255	02/04/24 04:59	СН	EET MID

Client Sample ID: BH - 10 Date Collected: 01/25/24 12:00 Date Received: 01/29/24 11:47

	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	72388	02/05/24 14:05	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72529	02/08/24 06:32	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			72684	02/08/24 06:32	SM	EET MID
Total/NA	Analysis	8015 NM		1			17984	02/05/24 23:39	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	17905	01/30/24 11:32	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17969	02/05/24 23:39	WP	EET DAL
Soluble	Leach	DI Leach			4.99 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		1			72255	02/04/24 05:06	СН	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300 EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

8 9 10

Accreditation/Certification Summary

Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6051-1 SDG: 23E - 04616

Laboratory: Eurofins Dallas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date	
Texas	NELAP	T104704295-23-34	06-30-24	
- han a fam. Ears fina	A 41 11 1			
Laboratory: Eurofins	Midland			
•	NICIANC tes for this laboratory were covered under each a	ccreditation/certification below.		
Laboratory: Eurofins Unless otherwise noted, all analy Authority		ccreditation/certification below.	Expiration Date	

Laboratory: Eurofins Midland

uthority	Program		Identification Number	Expiration Date
exas	NELAP		T104704400-23-26	06-30-24
The following engly	a are included in this report, but the	laboratory is not cortif	ind by the governing outbority. This liv	t may include analyter
ι,	1 ,	laboratory is not certif	ied by the governing authority. This lis	st may include analytes
ι,	s are included in this report, but the does not offer certification.	laboratory is not certif	ied by the governing authority. This lis	st may include analytes
ι,	1 ,	laboratory is not certifi Matrix	ied by the governing authority. This lis Analyte	st may include analytes

Method Summary

Client: Vertex Project/Site: JRV DI 1A CTB Job ID: 890-6051-1 SDG: 23E - 04616

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET DAL
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
Protocol Refe	erences:		
ASTM = A	STM International		
EPA = US	Environmental Protection Agency		
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition	n, November 1986 And Its Updates.	
TAL SOP	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences:		
EET DAL	= Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300		
EET MID	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Client: Vertex Project/Site: JRV DI 1A CTB

Job ID: 890-6051-1 SDG: 23E - 04616

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6051-1	BH - 09	Solid	01/25/24 10:00	01/29/24 11:47	0
890-6051-2	BH - 09	Solid	01/25/24 10:10	01/29/24 11:47	1'
890-6051-3	BH - 10	Solid	01/25/24 12:00	01/29/24 11:47	1'

Work Order No: 108 2151 00 00/215/200	Comments	srownfields RRC Superfund	APT Other:	Preservative Codes	None: NO DI Water: H ₂ O Cool: Cool MeOH: Me HCL: HC HNO ₃ : HN H ₂ SO ₄ : H ₃ NaOH: Na	IABIS IaSO ₃ +NaOH:	NaOH+Ascorbic Acid: SAPC	Sample Comments		TI Sn U V Zn /7470 /7471		e) Date/Time	Reviewed Date: D&75,27339 Rev. 2020.2
Work Order No	Wor	Program: UST/PST PRP B State of Project:	Deliverables: EDD AC							g Mn Mo Ni K Se Ag SiO ₂ Na Sr TI Sn U V Zn Se Ag TI U Hg: 1631/245.1/7470 /7471	ms and conditions syond the control ss previously negotiated.	ure) Received by: (Signature)	
Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-540, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (572) 392-7550, Carlsbach, NM (575) 988-3199	Count quen	an put		Pres. ANALYSIS REQUEST		08) HC X3				s 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U	rofins Xenco, its affiliates and subcontractors. It assigns standard ter enses incurred by the client if such losses are due to circumstances be b Eurofins Xenco, but not analyzed. These terms will be enforced unle	Date/Time Relinquished by: (Signature) $39_{11} 47_{2}$	<u>a 10</u>
Environment Testing Xenco	3 Non	Address:	Email:	COLOL Rund	DI 11 CI B Due Date: SOUDALDYP TAT starts the day received by the lab, if received by 4:30pm	Nes No 3.4.2.2	Date Time Grah	Matrix Date Time Depth Grab/ # of Suppled Sampled Depth Comp Cont Suppled LU-U U U U U		200.8 / 6020: 8RCRA 13PPM Texas 11 AI S tal(s) to be analyzed TCLP / SPLP 6010 : 8RCRA	Process-signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco, will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$8.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously negotiated.	e) Beceived by: (Signatyre) Buun 8	
🐝 eurofins		Company name: Address: City, State ZIP:	Phone:	Project Name: 250	201	Samples Received Intact: Samples Received Intact: Cooler Custody Seals: Y Total Containers:		Sample Identification		Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	worce: Signature of this document and rell of service. Elyrofins Xenco will be liable onl, of Eurofins Xenco. A minimum charge of \$4	Relinquished by: (Signature)	

Received by OCD: 4/29/2024 11:25:14 AM

Custody Seals Intact: Custody Seal No.: ∆ Yes ∆ No

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

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Eurofins Midland 1211 W. Florida Ave Midland, TX 79701 Phone 432-704-5440	0	Chain of Custody Record	f Cust	ody R	9CO	rd						1.2	103C -	mua					<u>ې</u>	eu	🔅 eurofins	ins		Environment Testing	ronn	ig .	E.	24 25	6.5
Client Information (Sub Contract Lab)	Sampler:			Lab PM: Krame	Lab PM: Kramer, Jessica	sica						С С	Carrier T	Tracking No(s):	ig No	s):			ωO	30-9-	COC No: 880-9107.1								
Client Contact: Shipping/Receiving	Phone:			E-Mail: Jessica.Kramer@et.eurofinsus.	à.Kra	mer(@et.e	urofin	ISUS.C	com		N Sta	State of Origin: New Mexico	Origin	0				קק	Page: Page	Page: Page 1 of 1								
Company: Eurofins Environment Testing South Centr				-	Accreditations Required (See note): NELAP - Texas	ations	: Requi	red (S	ee not	e):									8 J	Job #:	Job #: 890-6051-1	[
Address: 9701 Harry Hines Blvd,	Due Date Requested: 2/2/2024	ed:							Ana	Analysis		Requested	ste	٩						LO.	Preservation Cod	n Co			Hexane				-
City: Dallas	TAT Requested (days):	ays):													-	-			0	B - NaO C - Zn A)H \cetat	(D)	٥oz	N - None O - AsNa(NaO:	0			
State, Zip: TX, 75220																			n m c	- Nat	D - Nitric Acid E - NaHSO4	u	- סג	Q - Na2SO3 R - Na2SO3	2SO(ŭ			
Phone: 214-902-0300(Tel)	PO #				0)														тω.	G - Amchlor H - Ascorbic	G - Amchlor H - Ascorbic Acid	Acid	v	S - H2SO4 T - TSP Dodecahydrate	SO4	Jeca.	hydra	ate	_
Email:	WO #						rep			_										I - Ice J - DI Water	/ater		≤<0	V - MCAA W - pH 4-5	:AA 4-5	,			_
Project Name: JRV DI 1A CTR	Project #: 89000161			PV-		_	_S_P				-							taine		L - EDA			NК	Y - Trizma Z - other (specify)	:ma er (sp	vecify	5		
Site:	SSOW#:						8015NN	_										of cos		Other:									L
		Sample	Sample Type (C=comp,	Matrix (w=water, S=solid, O=waste/oil	Id Filtered rform MS/M	5MOD_Calc	5MOD_NM/8											tal Number	an Hunned										
Sample identification - client in (cap in)			Preservation Code:	E		8	8												\uparrow										
BH - 09 (890-6051-1)	1/25/24	10:00 Mountain		Solid		×	×																						
BH - 09 (890-6051-2)	1/25/24	10:10 Mountain		Solid		×	×											<u> </u>			[I
BH - 10 (890-6051-3)	1/25/24	12:00 Mountain		Solid		×	×			+			-		-	-													_
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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our 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 compliance 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 compliance 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 compliance 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 compliance to Eurofins Environment Testing South Central, LLC attention immediately.	nent Testing South Cer I above for analysis/test ith Central, LLC attentic	itral, LLC places s/matrix being a mimmediately.	the ownership nalyzed, the sa If all requested	of method, an amples must be accreditations	alyte & shippe are cu	accre ed bac rrent t	ditatior ck to th o date,	e Euro return	iance fins Er the si	upon nvironi gned (our su ment Chain	lbcont festin of Cu	g Sou stody	h Cel attest	ories. htral, l ng to	LC la	samp boration	iance	r oth to E	nt is fu er inst urofin	onwart ruction s Envi	ns wil ronm	Inder II be p Ient T	chaii provic estin	n-of-c ded g So	Susto Any uth C	char Centr	lf the าges ral,	φ
Possible Hazard Identification Unconfirmed					San		Sample Disposal (A f	osal To Cl	(Afe ient	ee may	\ V be	be assessed if samples are	<mark>assessed if sa</mark> i Disposal By Lab	dif: By L	ab	les	∏are	retai Arc	retained Ion Archive For	For	jer ti	than		month) Mont	nth) Months				
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank:	able Rank: 2			Spe	ial I	Special Instructions/QC	ctions		Requirements	lirem	ents											1						
Empty Kit Relinquished by:		Date:			Time:								Me	Method of Shipment:	of Ship	oment													
Relinquished by:	Date/Time:		<u></u>	Company		Rece	Received by:		X	De	80	-	4)	1	Υş	Bate/Time:	ē						0	Company	any				
	Date/Time: 2/3/	204/	°521	Company		Rece	Received by:		0	S						Daterime	l'A	N	tio	1	2	S	0 0	Company	yue voi				
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Received by OCD: 4/29/2024 11:25:14 AM

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our 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 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 compliance to Eurofins Environment Testing South Central, the compliance to Eurofins Environment Testing South Central, the current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, the current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central, the current to date in the sample should be brought to Eurofins Environment Testing South Central, the current to date. State, Zip: TX, 75220 Dallas Eurofins Environment Testing South Centr **Client Information** Midland, TX 79701 **Eurofins Midland** BH - 10 (890-6051-3) BH - 09 (890-6051-2) BH - 09 (890-6051-1) Sample Identification - Client ID (Lab ID) Shipping/Receiving Phone: 432-704-5440 1211 W. Florida Ave Deliverable Requested: I, II, III, IV, Other (specify) Possible Hazard Identification 5 214-902-0300(Tel) 9701 Harry Hines Blvd Client Contact: Relinquished by: Relinquished by: Empty Kit Relinquished by **IRV DI 1A CTB** none elinquished by ompany Inconfirmed Custody Seals Intact: oject Name Yes A No (Sub Contract Lab Custody Seal No. K Project #: 89000161 Due Date Requested: 2/2/2024 Phone TAT Requested (days): Sampler NO # PO # Primary Deliverable Rank: 2 Date/Time Date SOW# Sample Date 1/25/24 1/25/24 1/25/24 202 Chain of Custody Record Date: Mountain 12:00 Mountain 10:10 Mountain Sample C Time 10:00 (C=comp, G=grab) Sample Preservation Code: Type 100 0 r BT=Tissue, A≂Ai Company Company Company O=waste/oil, (W=water, S=solid, Matrix Solid Solid Solid Kramer, Jessica Jessica.Kramer@et.eurofinsus.com E-Mail: _ab PM: Field Filtered Sample (Yes or No) Time: **NELAP** - Texas Accreditations Required (See note): Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For Month Perform MS/MSD (Yes or No) Special Instructions/QC Requirements: Received by Received by: Received by: 8015MOD_Calc Cooler Temperature(s) °C and Other Remarks: × × × × × × 8015MOD_NM/8015NM_S_Prep Analysis Requested 12an State of Origin: New Mexico Carrier Tracking No(s): Method of Shipment Date Time Ý -----**Total Number of containers** 🔅 eurofins I - Ice J - DI Water K - EDTA L - EDA C - Zn Acetate D - Nitric Acid COC No: 880-9107.1 A - HCL B - NaOH Page 1 of 1 G - Amchlor H - Ascorbic Acid Preservation Codes: E - NaHSO4 890-6051-1 Other: JOD #: - MeOH Special Instructions/Note: V - MCAA W - pH 4-5 Y - Trizma 0 - AsNa02 P - Na204S Q - Na2S03 R - Na2S2O3 U - Acetone S - H2SO4 T - TSP Dodecahydrate N - None M - Hexane Z - other (specify) **Environment** Testing Company Company Ver: 06/08/2021 Company Months

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Job Number: 890-6051-1 SDG Number: 23E - 04616

List Source: Eurofins Carlsbad

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6051 List Number: 1 Creator: Bruns, Shannon

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

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6051 List Number: 3 Creator: Thompson, Christopher

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

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Job Number: 890-6051-1 SDG Number: 23E - 04616

List Source: Eurofins Dallas

List Creation: 02/03/24 01:45 PM

Job Number: 890-6051-1 SDG Number: 23E - 04616

List Source: Eurofins Midland

List Creation: 01/30/24 10:34 AM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6051 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/13/2024 3:59:39 PM

JOB DESCRIPTION

JRU DI 1A CTB 23E-04616

JOB NUMBER

890-6053-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



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Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/13/2024 3:59:39 PM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

SDG: 23E-04616

Laboratory Job ID: 890-6053-1

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	Definitions/Glossony		
	Definitions/Glossary	=	
Client: Vertex Project/Site: J	RU DI 1A CTB	Job ID: 890-6053-1 SDG: 23E-04616	
Qualifiers			
GC VOA			2
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
F2	MS/MSD RPD exceeds control limits		
S1-	Surrogate recovery exceeds control limits, low biased.		
U	Indicates the analyte was analyzed for but not detected.		
GC Semi VOA			
Qualifier	Qualifier Description		
F1	MS and/or MSD recovery exceeds control limits.		
S1-	Surrogate recovery exceeds control limits, low biased.		
S1+	Surrogate recovery exceeds control limits, high biased.		
U	Indicates the analyte was analyzed for but not detected.		
HPLC/IC			
Qualifier	Qualifier Description		
 F1	MS and/or MSD recovery exceeds control limits.		
U	Indicates the analyte was analyzed for but not detected.		
Glossary			
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis		
%R	Percent Recovery		
CFL	Contains Free Liquid		
CFU	Colony Forming Unit		
CNF	Contains No Free Liquid		
DER	Duplicate Error Ratio (normalized absolute difference)		
Dil Fac	Dilution Factor		
DL	Detection Limit (DoD/DOE)		
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample		
DLC	Decision Level Concentration (Radiochemistry)		
EDL	Estimated Detection Limit (Dioxin)		
LOD	Limit of Detection (DoD/DOE)		
LOQ	Limit of Quantitation (DoD/DOE)		
MCL	EPA recommended "Maximum Contaminant Level"		

- MDC Minimum Detectable Concentration (Radiochemistry)
- MDL Method Detection Limit
- ML Minimum Level (Dioxin)
- MPN Most Probable Number
- MQL Method Quantitation Limit NC Not Calculated
- ND Not Detected at the reporting limit (or MDL or EDL if shown)
- NEGNegative / AbsentPOSPositive / Present
- PQL Practical Quantitation Limit
- PRES Presumptive
- QC Quality Control
- RER Relative Error Ratio (Radiochemistry)
- RL Reporting Limit or Requested Limit (Radiochemistry)
- RPD Relative Percent Difference, a measure of the relative difference between two points
- TEF Toxicity Equivalent Factor (Dioxin)
- TEQ Toxicity Equivalent Quotient (Dioxin)
- TNTC Too Numerous To Count

Case Narrative

Job ID: 890-6053-1

Client: Vertex Project: JRU DI 1A CTB

Job ID: 890-6053-1

Eurofins Carlsbad

Job Narrative 890-6053-1

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Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/29/2024 11:47 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 2.2°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH24-11 (890-6053-1), BH24-11 (890-6053-2), BH24-12 (890-6053-3), BH24-12 (890-6053-4), BH24-13 (890-6053-5), BH24-13 (890-6053-6), BH24-13 (890-6053-7), BH24-14 (890-6053-8), BH24-14 (890-6053-9) and BH24-15 (890-6053-10).

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-72417 and analytical batch 880-72621 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following samples were outside control limits: BH24-11 (890-6053-1), BH24-11 (890-6053-2), BH24-12 (890-6053-4) and BH24-13 (890-6053-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 870-17962 and analytical batch 870-17706 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (890-6046-A-1-N MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside the upper control limit: BH24-12 (890-6053-3), BH24-12 (890-6053-4), BH24-13 (890-6053-6) and BH24-14 (890-6053-9). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: BH24-11 (890-6053-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-71959 and analytical batch 880-72175 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client: Vertex Project: JRU DI 1A CTB	Case Narrative	Job ID: 890-6053-1
Job ID: 890-6053-1 (Continued)		Eurofins Carlsbad

Job ID: 890-6053-1 SDG: 23E-04616

Matrix: Solid

5

Lab Sample ID: 890-6053-1

Client Sample ID: BH24-11

Date Collected: 01/25/24 10:20 Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U F1 F2	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:44	1
Toluene	<0.00200	U F1 F2	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:44	1
Ethylbenzene	<0.00200	U F1 F2	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:44	1
m-Xylene & p-Xylene	<0.00401	U F1 F2	0.00401	mg/Kg		02/05/24 15:57	02/08/24 11:44	1
o-Xylene	<0.00200	U F1 F2	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:44	1
Xylenes, Total	<0.00401	U F1 F2	0.00401	mg/Kg		02/05/24 15:57	02/08/24 11:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	56	S1-	70 - 130			02/05/24 15:57	02/08/24 11:44	1
1,4-Difluorobenzene (Surr)	86		70 - 130			02/05/24 15:57	02/08/24 11:44	1
Method: TAL SOP Total BTEX - 1	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/08/24 11:44	1
Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.9	U	49.9	mg/Kg			02/04/24 18:05	1
Mathadi CW04C 0045D NM Dia								
Method: SW846 8015B NM - Dies Analyte		Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)			49.9	mg/Kg		01/30/24 14:56	02/04/24 18:05	
Diesel Range Organics (Over	<49.9		49.9	mg/Kg		01/30/24 14:56	02/04/24 18:05	1
C10-C28)	\$43.5	0	43.3	ing/itg		01/30/24 14:30	02/04/24 10:03	
Oll Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		01/30/24 14:56	02/04/24 18:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	90		70 - 130			01/30/24 14:56	02/04/24 18:05	1
1-Chlorooctane	81		70 - 130			01/30/24 14:56	02/04/24 18:05	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	413		24.9	mg/Kg			02/04/24 06:14	5
lient Sample ID: BH24-11						Lab Sar	nple ID: 890-	6053-2
ate Collected: 01/25/24 10:30							-	x: Solid
ate Received: 01/29/24 11:47								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
	e.game comp			11	D	Dremered	Amelymed	Dil Fac
	Result	Qualifier	RL	Unit		Prebareo	Analyzed	
Analyte		Qualifier	RL	Unit ma/Ka		Prepared	Analyzed	1
Analyte Benzene Toluene	Result <0.00199 <0.00199	Qualifier U U	RL 0.00199 0.00199	mg/Kg mg/Kg		02/05/24 15:57 02/05/24 15:57	02/08/24 12:05 02/08/24 12:05	

m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg	02/05/24 15:57	02/08/24 12:05	1
o-Xylene	<0.00199	U	0.00199	mg/Kg	02/05/24 15:57	02/08/24 12:05	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg	02/05/24 15:57	02/08/24 12:05	1
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 90	Qualifier	Limits 70 - 130		Prepared 02/05/24 15:57	Analyzed	Dil Fac

Eurofins Carlsbad
Client Sample Results

Job ID: 890-6053-1 SDG: 23E-04616

Matrix: Solid

5

Lab Sample ID: 890-6053-2

Client Sample ID: BH24-11 Date Collected: 01/25/24 10:30

Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/08/24 12:05	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	79.9		49.8	mg/Kg			02/13/24 12:23	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.8	U	49.8	mg/Kg		01/30/24 14:56	02/13/24 12:23	1
Diesel Range Organics (Over C10-C28)	79.9		49.8	mg/Kg		01/30/24 14:56	02/13/24 12:23	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		01/30/24 14:56	02/13/24 12:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl		S1+	70 - 130			01/30/24 14:56	02/13/24 12:23	1
1-Chlorooctane	156	S1+	70 - 130			01/30/24 14:56	02/13/24 12:23	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	465		25.2	mg/Kg			02/04/24 06:21	5
lient Sample ID: BH24-12							nple ID: 890-	

Date Received: 01/29/24 11:47

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 12:25	·
Toluene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 12:25	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 12:25	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/05/24 15:57	02/08/24 12:25	
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 12:25	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/05/24 15:57	02/08/24 12:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		70 - 130			02/05/24 15:57	02/08/24 12:25	1
1,4-Difluorobenzene (Surr)	78		70 - 130			02/05/24 15:57	02/08/24 12:25	1
Method: TAL SOP Total BTE	(- Total BTEX Cald	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/08/24 12:25	1
Method: SW846 8015 NM - Di	iesel Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
	<50.1	U	50.1	mg/Kg			02/13/24 12:44	

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.1	U	50.1	mg/Kg		01/30/24 14:56	02/13/24 12:44	1
Diesel Range Organics (Over C10-C28)	<50.1	U	50.1	mg/Kg		01/30/24 14:56	02/13/24 12:44	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		01/30/24 14:56	02/13/24 12:44	1

5

		Clien	t Sample Re	sults				
Client: Vertex			•				Job ID: 890	-6053-1
Project/Site: JRU DI 1A CTB							SDG: 23	E-04616
Client Sample ID: BH24-12						Lab Sar	nple ID: 890-	6053-3
Date Collected: 01/25/24 10:40							-	x: Solid
Date Received: 01/29/24 11:47								
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl		S1+	70 - 130			01/30/24 14:56	02/13/24 12:44	1
1-Chlorooctane	145	S1+	70 - 130			01/30/24 14:56	02/13/24 12:44	1
_ Method: EPA 300.0 - Anions, Io	n Chromatograr	hy - Solub						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	427		25.0	mg/Kg			02/04/24 06:28	5
Client Sample ID: BH24-12						l ah Sar	nple ID: 890-	6053-4
Date Collected: 01/25/24 10:50							-	ix: Solid
Date Received: 01/29/24 11:47							Wath	x. 5010
-								
Method: SW846 8021B - Volatile	e Organic Comp	ounds (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 12:46	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 12:46	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 12:46	1
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/05/24 15:57	02/08/24 12:46	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 12:46	
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/05/24 15:57	02/08/24 12:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)			70 - 130			02/05/24 15:57	02/08/24 12:46	1
1,4-Difluorobenzene (Surr)	65	S1-	70 - 130			02/05/24 15:57	02/08/24 12:46	1
- Method: TAL SOP Total BTEX -	Total BTEX Cal	culation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/08/24 12:46	1
-								
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.4	U	50.4	mg/Kg			02/13/24 13:05	1
Method: SW846 8015B NM - Die	esel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.4	U	50.4	mg/Kg		01/30/24 14:56	02/13/24 13:05	1
Diesel Range Organics (Over	<50.4	U	50.4	mg/Kg		01/30/24 14:56	02/13/24 13:05	1

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Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

C10-C28)

Surrogate

o-Terphenyl

Analyte

Chloride

1-Chlorooctane

Oll Range Organics (Over C28-C36)

<50.4 U

%Recovery Qualifier

114

435

137 S1+

Result Qualifier

50.4

RL

24.8

Limits

70 - 130

70 - 130

mg/Kg

Unit

mg/Kg

01/30/24 14:56

Prepared

01/30/24 14:56

01/30/24 14:56

Prepared

D

02/13/24 13:05

Analyzed

02/13/24 13:05

02/13/24 13:05

Analyzed

02/04/24 06:34

1

1

1

5

Dil Fac

Dil Fac

Job ID: 890-6053-1 SDG: 23E-04616

Matrix: Solid

5

Lab Sample ID: 890-6053-5

Client Sample ID: BH24-13

Date Collected: 01/25/24 11:00 Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 13:07	1
Toluene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 13:07	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 13:07	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/05/24 15:57	02/08/24 13:07	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 13:07	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/05/24 15:57	02/08/24 13:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	81		70 - 130			02/05/24 15:57	02/08/24 13:07	1
1,4-Difluorobenzene (Surr)	63	S1-	70 - 130			02/05/24 15:57	02/08/24 13:07	1
Method: TAL SOP Total BTEX - 1	Total BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/08/24 13:07	1
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<50.1	U	50.1	mg/Kg			02/04/24 19:28	
Method: SW846 8015B NM - Dies			· · ·	Unit	п	Propared	Analyzed	Dil Ea
Analyte	Result	Qualifier		Unit	<u>D</u>	Prepared	Analyzed	
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over		Qualifier U	· · ·	Unit mg/Kg mg/Kg	<u> </u>	Prepared 01/30/24 14:56 01/30/24 14:56	Analyzed 02/04/24 19:28 02/04/24 19:28	
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28)	Result <50.1	Qualifier U U	RL 50.1	mg/Kg	<u> </u>	01/30/24 14:56	02/04/24 19:28	·
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	Result <50.1 <50.1 <50.1	Qualifier U U U	RL 50.1 50.1 50.1	mg/Kg mg/Kg	<u> </u>	01/30/24 14:56 01/30/24 14:56 01/30/24 14:56	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28	
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate		Qualifier U U	RL 50.1 50.1 50.1 Limits	mg/Kg mg/Kg	<u> </u>	01/30/24 14:56 01/30/24 14:56 01/30/24 14:56 Prepared	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 Analyzed	Dil Fa
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate p-Terphenyl	Result <50.1 <50.1 <50.1	Qualifier U U U	RL 50.1 50.1 50.1	mg/Kg mg/Kg	<u>D</u>	01/30/24 14:56 01/30/24 14:56 01/30/24 14:56	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28	Dil Fa
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane	Result <50.1	Qualifier U U Qualifier	RL 50.1 50.1 50.1 70.1 70.130 70.130	mg/Kg mg/Kg	<u>D</u>	01/30/24 14:56 01/30/24 14:56 01/30/24 14:56 Prepared 01/30/24 14:56	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 <u>Analyzed</u> 02/04/24 19:28	Dil Fa
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane Method: EPA 300.0 - Anions, Ion	Result <50.1	Qualifier U U Qualifier	RL 50.1 50.1 50.1 70.130 70.130 70.130	mg/Kg mg/Kg mg/Kg		01/30/24 14:56 01/30/24 14:56 01/30/24 14:56 Prepared 01/30/24 14:56 01/30/24 14:56	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28	Dil Fac
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane	Result <50.1	Qualifier U U Qualifier	RL 50.1 50.1 50.1 70.1 70.130 70.130	mg/Kg mg/Kg	<u>D</u>	01/30/24 14:56 01/30/24 14:56 01/30/24 14:56 Prepared 01/30/24 14:56	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 <u>Analyzed</u> 02/04/24 19:28	Dil Fa
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane Method: EPA 300.0 - Anions, Ion Analyte Chloride	Result <50.1	Qualifier U U Qualifier	RL 50.1 50.1 50.1 70.130 70.130 8 RL	mg/Kg mg/Kg mg/Kg Unit		01/30/24 14:56 01/30/24 14:56 01/30/24 14:56 Prepared 01/30/24 14:56 01/30/24 14:56 Prepared	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 Analyzed 02/04/24 19:28 02/04/24 19:28 Analyzed 02/04/24 06:41	Dil Fa
Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane Method: EPA 300.0 - Anions, Ion Analyte	Result <50.1	Qualifier U U Qualifier	RL 50.1 50.1 50.1 70.130 70.130 8 RL	mg/Kg mg/Kg mg/Kg Unit		01/30/24 14:56 01/30/24 14:56 01/30/24 14:56 Prepared 01/30/24 14:56 01/30/24 14:56 Prepared	02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 02/04/24 19:28 Analyzed 02/04/24 06:41 nple ID: 890-	Dil Fa

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:27	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:27	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:27	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/05/24 15:57	02/08/24 13:27	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:27	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/05/24 15:57	02/08/24 13:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		70 - 130			02/05/24 15:57	02/08/24 13:27	1
1,4-Difluorobenzene (Surr)	83		70 - 130			02/05/24 15:57	02/08/24 13:27	1

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Released to Imaging: 5/10/2024 11:00:40 AM

Client Sample Results

Job ID: 890-6053-1 SDG: 23E-04616

Client Sample ID: BH24-13

Date Collected: 01/25/24 11:10 Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/08/24 13:27	1
Method: SW846 8015 NM - Diese	I Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.6	U	49.6	mg/Kg			02/13/24 13:25	1
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.6	U	49.6	mg/Kg		01/30/24 14:56	02/13/24 13:25	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		01/30/24 14:56	02/13/24 13:25	1
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		01/30/24 14:56	02/13/24 13:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	180	S1+	70 - 130			01/30/24 14:56	02/13/24 13:25	1
1-Chlorooctane	154	S1+	70 - 130			01/30/24 14:56	02/13/24 13:25	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	439		25.2	mg/Kg			02/04/24 06:48	5
lient Sample ID: BH24-13						Lab Sar	nple ID: 890-	6052 7

Date Received: 01/29/24 11:47

	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	< 0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:48	
Toluene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:48	
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:48	
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/05/24 15:57	02/08/24 13:48	
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/05/24 15:57	02/08/24 13:48	
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/05/24 15:57	02/08/24 13:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		70 - 130			02/05/24 15:57	02/08/24 13:48	1
1,4-Difluorobenzene (Surr)	73		70 - 130			02/05/24 15:57	02/08/24 13:48	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte Total BTEX	Result <0.00398		RL 0.00398	Unit mg/Kg	<u> </u>	Prepared	Analyzed 02/08/24 13:48	Dil Fac
Total BTEX	<0.00398	U	0.00398		<u> </u>	Prepared		
Analyte Total BTEX Method: SW846 8015 NM - Dies Analyte	<0.00398 sel Range Organ	U	0.00398		<u>D</u> 	Prepared		
Total BTEX Method: SW846 8015 NM - Dies	<0.00398 sel Range Organ	U ics (DRO) (Qualifier	0.00398	mg/Kg		<u>.</u>	02/08/24 13:48	1
Total BTEX Method: SW846 8015 NM - Dies Analyte	sel Range Organ Result <50.2	U ics (DRO) (0 Qualifier U	0.00398 GC) RL 50.2	mg/Kg Unit		<u>.</u>	02/08/24 13:48 Analyzed	1

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.2	U	50.2	mg/Kg		01/30/24 14:56	02/04/24 20:09	1
Diesel Range Organics (Over C10-C28)	<50.2	U	50.2	mg/Kg		01/30/24 14:56	02/04/24 20:09	1
Oll Range Organics (Over C28-C36)	<50.2	U	50.2	mg/Kg		01/30/24 14:56	02/04/24 20:09	1

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Lab Sample ID: 890-6053-6 Matrix: Solid 5 Client: Vertex

3 4 5

Client Sample Results

Job ID: 890-6053-1 SDG: 23E-04616

Project/Site: JRU DI 1A CTB							SDG: 231	
lient Sample ID: BH24-13						Lab San	nple ID: 890-	6053-
ate Collected: 01/25/24 11:20							Matri	x: Soli
ate Received: 01/29/24 11:47								
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
o-Terphenyl		Quanner	70 - 130			01/30/24 14:56	02/04/24 20:09	
1-Chlorooctane	80		70 - 130			01/30/24 14:56	02/04/24 20:09	
	00		101100			01/00/24 14:00	02/04/24 20:00	
Method: EPA 300.0 - Anions, lor	n Chromatograp	hy - Solub	le					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	812		50.5	mg/Kg			02/04/24 06:55	1
lient Sample ID: BH24-14						Lab San	nple ID: 890-	6053-
ate Collected: 01/25/24 11:30								x: Soli
ate Received: 01/29/24 11:47								
Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)					
Analyte		Qualifier	, RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 14:08	
Toluene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 14:08	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 14:08	
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/05/24 15:57	02/08/24 14:08	
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 14:08	
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/05/24 15:57	02/08/24 14:08	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)			70 - 130			02/05/24 15:57	02/08/24 14:08	
1,4-Difluorobenzene (Surr)	76		70 - 130			02/05/24 15:57	02/08/24 14:08	
- Method: TAL SOP Total BTEX - ⁻	Total BTEX Cale	sulation						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total BTEX	<0.00399	-	0.00399	mg/Kg			02/08/24 14:08	
-				5.5				
Method: SW846 8015 NM - Diese								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Total TPH	<49.7	U	49.7	mg/Kg			02/04/24 20:30	
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline Range Organics (GRO)	<49.7	U	49.7	mg/Kg		01/30/24 14:56	02/04/24 20:30	
Diesel Range Organics (Over	<49.7	U	49.7	mg/Kg		01/30/24 14:56	02/04/24 20:30	
C10-C28)	40 7		40 7					
Oll Range Organics (Over C28-C36)	<49.7	U	49.7	mg/Kg		01/30/24 14:56	02/04/24 20:30	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
o-Terphenyl	86		70 - 130			01/30/24 14:56	02/04/24 20:30	
1-Chlorooctane	78		70 - 130			01/30/24 14:56	02/04/24 20:30	
Method: EPA 300.0 - Anions, lor	Chromatograp	hy - Solub	le					
Analyte	• •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	531		25.0	mg/Kg			02/03/24 17:50	

Job ID: 890-6053-1 SDG: 23E-04616

Matrix: Solid

Lab Sample ID: 890-6053-9

Client Sample ID: BH24-14

Date Collected: 01/25/24 11:40 Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Benzene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 14:29	
Toluene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 14:29	
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 14:29	
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/05/24 15:57	02/08/24 14:29	
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/05/24 15:57	02/08/24 14:29	
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/05/24 15:57	02/08/24 14:29	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil F
4-Bromofluorobenzene (Surr)	76		70 - 130			02/05/24 15:57	02/08/24 14:29	
1,4-Difluorobenzene (Surr)	71		70 - 130			02/05/24 15:57	02/08/24 14:29	
Method: TAL SOP Total BTEX - 1	Total BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Total BTEX	< 0.00402	U	0.00402	mg/Kg			02/08/24 14:29	
Method: SW846 8015 NM - Diese	el Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Total TPH	<50.0	U	50.0	mg/Kg			02/13/24 13:46	
Method: SW846 8015B NM - Dies	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		01/30/24 14:56	02/13/24 13:46	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/30/24 14:56	02/13/24 13:46	
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/30/24 14:56	02/13/24 13:46	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil I
o-Terphenyl	174	S1+	70 - 130			01/30/24 14:56	02/13/24 13:46	
1-Chlorooctane	154	S1+	70 - 130			01/30/24 14:56	02/13/24 13:46	
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubl	e					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil F
Chloride	153		5.02	mg/Kg			02/03/24 17:55	
lient Sample ID: BH24-15						Lab Sam	ple ID: 890-6	053-′
ate Collected: 01/25/24 11:50 ate Received: 01/29/24 11:47							Matri	x: So
	Organia Comm	oundo (CC)	\ \					
Method: SW846 8021B - Volatile	-	Qualifier) RL	Unit	D	Bronarad	Analyzed	Dil F
Analyte Benzene			0.00200			Prepared	Analyzed 02/08/24 14:49	
	<0.00Z00	0	0.00200	mg/Kg		02/05/24 15:57	02/00/24 14:49	
			0.00000	m ~// ~		02/05/24 45.57	02/00/24 44.40	
Toluene	<0.00200		0.00200	mg/Kg		02/05/24 15:57	02/08/24 14:49	
		U	0.00200 0.00200 0.00401	mg/Kg mg/Kg mg/Kg		02/05/24 15:57 02/05/24 15:57 02/05/24 15:57	02/08/24 14:49 02/08/24 14:49 02/08/24 14:49	

o-Xylene	<0.00200 U	0.00200	mg/Kg	02/05/24 15:57	02/08/24 14:49	1
Xylenes, Total	<0.00401 U	0.00401	mg/Kg	02/05/24 15:57	02/08/24 14:49	1
Surrogate	%Recovery Qual	lifier Limits		Prepared	Analyzed	Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery Qual	Limits 70 - 130		Prepared 02/05/24 15:57	Analyzed 02/08/24 14:49	Dil Fac

Released to Imaging: 5/10/2024 11:00:40 AM

2/13/2024

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Client Sample Results

Lab Sample ID: 890-6053-10

Client Sample ID: BH24-15

Date Collected: 01/25/24 11:50 Date Received: 01/29/24 11:47

Project/Site: JRU DI 1A CTB

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401	mg/Kg			02/08/24 14:49	1
Method: SW846 8015 NM - Diesel	Range Organ	ics (DRO) (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.3	U	50.3	mg/Kg			02/04/24 21:11	1
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.3	U	50.3	mg/Kg		01/30/24 14:56	02/04/24 21:11	1
Diesel Range Organics (Over	<50.3	U	50.3	mg/Kg		01/30/24 14:56	02/04/24 21:11	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		01/30/24 14:56	02/04/24 21:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	94		70 - 130			01/30/24 14:56	02/04/24 21:11	1
1-Chlorooctane	85		70 - 130			01/30/24 14:56	02/04/24 21:11	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	hy - Solubl	e					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	319		25.2	mg/Kg			02/03/24 18:00	5

Job ID: 890-6053-1 SDG: 23E-04616

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-6053-1	BH24-11	56 S1-	86
890-6053-1 MS	BH24-11	120	95
890-6053-1 MSD	BH24-11	84	78
890-6053-2	BH24-11	90	66 S1-
890-6053-3	BH24-12	78	78
890-6053-4	BH24-12	89	65 S1-
890-6053-5	BH24-13	81	63 S1-
890-6053-6	BH24-13	86	83
890-6053-7	BH24-13	85	73
890-6053-8	BH24-14	84	76
890-6053-9	BH24-14	76	71
890-6053-10	BH24-15	90	73
LCS 880-72417/1-A	Lab Control Sample	122	97
LCSD 880-72417/2-A	Lab Control Sample Dup	114	100

85

Surrogate Legend

MB 880-72417/5-A

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

Method Blank

Matrix: Solid

_			
		OTPH1	1CO1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-6046-A-1-M MS	Matrix Spike	70	72
890-6046-A-1-N MSD	Matrix Spike Duplicate	64 S1-	66 S1-
890-6053-1	BH24-11	90	81
890-6053-2	BH24-11	180 S1+	156 S1+
890-6053-3	BH24-12	171 S1+	145 S1+
890-6053-4	BH24-12	137 S1+	114
890-6053-5	BH24-13	91	81
890-6053-6	BH24-13	180 S1+	154 S1+
890-6053-7	BH24-13	91	80
890-6053-8	BH24-14	86	78
890-6053-9	BH24-14	174 S1+	154 S1+
890-6053-10	BH24-15	94	85
LCS 870-17962/1-A	Lab Control Sample	99	104
LCSD 870-17962/2-A	Lab Control Sample Dup	100	105
MB 870-17962/3-A	Method Blank	125	105

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Surrogate Legend

OTPH = o-Terphenyl 1CO = 1-Chlorooctane SDG: 23E-04616

Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 890-6053-1

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QC Sample Results

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-72417/5-A

Matrix: Solid Analysis Batch: 72621

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:23	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:23	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:23	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/05/24 15:57	02/08/24 11:23	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/05/24 15:57	02/08/24 11:23	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/05/24 15:57	02/08/24 11:23	1
	МВ	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		70 - 130			02/05/24 15:57	02/08/24 11:23	1
1,4-Difluorobenzene (Surr)	85		70 - 130			02/05/24 15:57	02/08/24 11:23	1

Lab Sample ID: LCS 880-72417/1-A Matrix: Solid

Analysis Batch: 72621

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.1062		mg/Kg		106	70 - 130	
Toluene	0.100	0.1096		mg/Kg		110	70 - 130	
Ethylbenzene	0.100	0.1268		mg/Kg		127	70 - 130	
m-Xylene & p-Xylene	0.200	0.2592		mg/Kg		130	70 - 130	
o-Xylene	0.100	0.1256		mg/Kg		126	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	122		70 - 130
1,4-Difluorobenzene (Surr)	97		70 - 130

Lab Sample ID: LCSD 880-72417/2-A

Matrix: Solid Local Desta

Analysis Batch: 72621							Prep	Batch:	72417
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.1042		mg/Kg		104	70 - 130	2	35
Toluene	0.100	0.1071		mg/Kg		107	70 - 130	2	35
Ethylbenzene	0.100	0.1207		mg/Kg		121	70 - 130	5	35
m-Xylene & p-Xylene	0.200	0.2482		mg/Kg		124	70 - 130	4	35
o-Xylene	0.100	0.1202		mg/Kg		120	70 - 130	4	35

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

Lab Sample ID: 890-6053-1 MS Matrix: Solid

Analysis Batch: 72621

Analysis Batch: 72621									Pre	o Batch: 72417
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F1 F2	0.0996	0.07830		mg/Kg		79	70 - 130	
Toluene	<0.00200	U F1 F2	0.0996	0.08209		mg/Kg		82	70 - 130	

Eurofins Carlsbad

Client Sample ID: BH24-11

Prep Type: Total/NA

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Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72417

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Prep Batch: 72417

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QC Sample Results

Lab Sample ID: 890-6053-1 MS Client Sample ID: BH24-11 Matrix: Solid Prep Type: Total/NA Analysis Batch: 72621 Prep Batch: 72417 Sample Sample Spike MS MS %Rec Analyte **Result Qualifier** Added Result Qualifier Unit %Rec Limits D <0.00200 U F1 F2 0.0996 0.09746 98 70 - 130 Ethylbenzene mg/Kg U F1 F2 m-Xylene & p-Xylene <0.00401 0.199 0.1910 mg/Kg 96 70 - 130 <0.00200 U F1 F2 0.0996 0.09653 97 70 - 130 o-Xylene mg/Kg MS MS Surrogate %Recovery Qualifier Limits 70 - 130 4-Bromofluorobenzene (Surr) 120 1,4-Difluorobenzene (Surr) 70 - 130 95 Lab Sample ID: 890-6053-1 MSD Client Sample ID: BH24-11 Matrix: Solid Prep Type: Total/NA Analysis Batch: 72621 Prep Batch: 72417 Sample Sample Spike MSD MSD %Rec RPD Result Qualifier %Rec Limit Analyte Added Result Qualifier Limits RPD Unit D Benzene <0.00200 U F1 F2 0.0990 0.01214 F1 F2 mg/Kg 12 70 - 130 146 35 Toluene <0.00200 U F1 F2 0.0990 0.01485 F1 F2 mg/Kg 15 70 - 130 139 35 Ethylbenzene 0.0990 0.01437 F1 F2 15 70 - 130 35 <0.00200 U F1 F2 mg/Kg 149 m-Xylene & p-Xylene <0.00401 U F1 F2 0.198 0.02919 F1 F2 mg/Kg 15 70 - 130 147 35 <0.00200 U F1 F2 0.0990 0.01774 F1 F2 70 - 130 o-Xylene mg/Kg 18 138 35 MSD MSD Qualifier Limits Surrogate %Recovery 4-Bromofluorobenzene (Surr) 84 70 - 130 1,4-Difluorobenzene (Surr) 78 70 - 130 Method: 8015B NM - Diesel Range Organics (DRO) (GC) Lab Sample ID: MB 870-17962/3-A **Client Sample ID: Method Blank**

Matrix: Solid	
Analysis Batch: 17706	

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		01/30/24 14:56	02/04/24 13:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/30/24 14:56	02/04/24 13:10	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/30/24 14:56	02/04/24 13:10	1
	MB	МВ						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	125		70 _ 130
1-Chlorooctane	105		70 - 130

Lab Sample ID: LCS 870-17962/1-A Matrix: Solid

Analysis Batch: 17706							Pre	p Batch: 17962	•
	Spike	LCS	LCS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)	1020	774.3		mg/Kg		76	70 - 130		
Diesel Range Organics (Over	1010	944.5		mg/Kg		94	70 - 130		
C10-C28)									

Prep Type: Total/NA

ab. 47000

Prep Type: Total/NA Prep Batch: 17962

02/04/24 13:10

02/04/24 13:10

Client Sample ID: Lab Control Sample

01/30/24 14:56

01/30/24 14:56

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QC Sample Results

Client: Vertex Project/Site: JRU DI 1A CTB

C10-C28)

Method: 8015B NM - Die

Method: 8015B NM - Diese	el Range Or	rganics ([)RO) (GC) ((Continue	;d)						
Lab Sample ID: LCS 870-1796	62/1-A						Client	t Sample	e ID: Lab Co	ontrol S	ample
Matrix: Solid										Type: To	
Analysis Batch: 17706										Batch:	
		LCS									
Surrogate	%Recovery		Limits								
o-Terphenyl	99		70 <u>-</u> 130								
1-Chlorooctane	104		70 - 130								
Lab Sample ID: LCSD 870-179	962/2-A					Clie	nt Sam	ople ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid										Type: To	
Analysis Batch: 17706										Batch:	
Analysis Batom			Spike	LCSD	LCSD				%Rec	Buton	RPD
Analyte			Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)		· ·	1020	899.4		mg/Kg		88	70 - 130	15	20
Diesel Range Organics (Over			1010	956.3		mg/Kg		95	70 - 130	1	20
C10-C28)										-	
	1.000	1.000									
0		LCSD	Limite								
Surrogate	%Recovery 100										
o-Terphenyl	100		70 - 130 70 - 130								
1-Chlorooctane	105		10 - 130								
Lab Sample ID: 890-6046-A-1-	-M MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Type: To	
Analysis Batch: 17706										Batch:	
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	•	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (GRO)	<50.3	U F1	1030	630.5	F1	mg/Kg		61	70 - 130		
Diesel Range Organics (Over	<50.3	U F1	1020	724.7	F1	mg/Kg		68	70 - 130		
C10-C28)											
	MS	MS									
Surrogate	%Recovery		Limits								
o-Terphenyl	70		70 - 130								
1-Chlorooctane	72		70 - 130								
Lab Sample ID: 890-6046-A-1-	-N MSD					CI	ient Sa	ample IC	D: Matrix Sp	pike Dur	olicate
Matrix: Solid								-		Type: To	
Analysis Batch: 17706										Batch:	
-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO)	<50.3	U F1	1030	595.0	F1	mg/Kg		58	70 - 130	6	20
Diesel Range Organics (Over	<50.3	U F1	1020	671.1	F1	mg/Kg		63	70 - 130	8	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	64	S1-	70 - 130
1-Chlorooctane	66	S1-	70 - 130

Client: Vertex

Project/Site: JRU DI 1A CTB

QC Sample Results

Job ID: 890-6053-1 SDG: 23E-04616

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-71959)/1- A							0	Client S	ample ID:	Method	Blank
Matrix: Solid										Prep	Type: S	olubl
Analysis Batch: 72175												
		MB MB										
Analyte	Re	esult Qualifier		RL	Unit		D	Pre	epared	Analyz	ed	Dil Fa
Chloride	<	5.00 U	5	5.00	mg/K	g				02/03/24	15:52	
Lab Sample ID: LCS 880-7195	9/2-A						CI	ient	Sample	ID: Lab Co	ontrol S	ample
Matrix: Solid											Type: S	
Analysis Batch: 72175												
			Spike		LCS					%Rec		
Analyte			Added		Qualifier	Unit		D	%Rec	Limits		
Chloride			250	249.3		mg/Kg			100	90 - 110		
Lab Sample ID: LCSD 880-719	59/3-A					Cli	ent S	Samı	ole ID: L	_ab Contro		
Matrix: Solid										Prep	Type: S	Soluble
Analysis Batch: 72175			Spike	1000	LCSD					%Rec		RPI
Analyta			Spike			lln:4		D	% Dee		000	
Analyte Chloride			Added	249.5	Qualifier			D 	%Rec 100	Limits 90 - 110	0	2
Chionde			250	249.5		mg/Kg			100	90 - 110	0	20
Lab Sample ID: 880-38562-A-1 Matrix: Solid	I-B MS								Client	Sample ID	: Matrix Type: S	-
										Fieh	Type. 3	olubi
Analysis Batch: 72175	Sample	Sample	Spike	MS	MS					%Rec		
		Qualifier	Added		Qualifier	Unit		D	%Rec	Limits		
A 121/10						Unit			/01100	Linnts		
Analyte Chloride	1180		1250	2629	F1	mg/Kg			116	90 - 110		
						mg/Kg			116	90 - 110		
Chloride Lab Sample ID: 880-38562-A-1	1180						Clien	nt Sa		: Matrix Sp		-
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid	1180						Clien	nt Sa		: Matrix Sp	oike Du Type: S	-
Chloride Lab Sample ID: 880-38562-A-1	1180	F1	1250	2629	F1		Clien	nt Sa		: Matrix Sp Prep		Solubl
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175	1180 I-C MSD Sample	F1 Sample	1250 Spike	2629 MSD	F1 MSD		Clien		mple ID	: Matrix Sp Prep %Rec	Type: S	Soluble RPI
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte	1180 I-C MSD Sample Result	F1 Sample Qualifier	1250 Spike Added	2629 MSD Result	F1 MSD Qualifier	Unit	Clien	nt Sa	mple ID	: Matrix Sp Prep %Rec Limits	Type: S	RPI Limi
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175	1180 I-C MSD Sample	F1 Sample Qualifier	1250 Spike	2629 MSD	F1 MSD Qualifier		Clien		mple ID	: Matrix Sp Prep %Rec	Type: S	RPI Limi
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9	1180 I-C MSD Sample <u>Result</u> 1180	F1 Sample Qualifier	1250 Spike Added	2629 MSD Result	F1 MSD Qualifier	Unit	Clien		%Rec 116	* Matrix Sp Prep %Rec Limits 90 - 110 Sample ID	Type: S	RPI Limi 2 Spike
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid	1180 I-C MSD Sample <u>Result</u> 1180	F1 Sample Qualifier	1250 Spike Added	2629 MSD Result	F1 MSD Qualifier	Unit	Clien		%Rec 116	* Matrix Sp Prep %Rec Limits 90 - 110 Sample ID	Type: S	RPI Limi 2 Spike
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9	1180 I-C MSD Sample Result 1180 D-B MS	F1 Sample Qualifier F1	Spike Added 1250	2629 MSD Result 2627	F1 MSD Qualifier F1	Unit	Clien		%Rec 116	: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep	Type: S	RPI Limi 20 C Spike
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175	1180 I-C MSD Sample Result 1180 O-B MS Sample	F1 Sample Qualifier F1 Sample	Spike Added 1250 Spike	2629 MSD Result 2627 MS	F1 MSD Qualifier F1 MS	Unit mg/Kg	Clien	<u>D</u>	%Rec 116 Client	: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	Type: S	RPI Limi 20 C Spike
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte	1180 I-C MSD Sample Result 1180 O-B MS Sample Result	F1 Sample Qualifier F1	Spike Added 1250 Spike Added	2629 MSD Result 2627 MS Result	F1 MSD Qualifier F1	Unit mg/Kg Unit	Clien		%Rec Client	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits	Type: S	RPE Limi 20 C Spike
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175	1180 I-C MSD Sample Result 1180 O-B MS Sample	F1 Sample Qualifier F1 Sample	Spike Added 1250 Spike	2629 MSD Result 2627 MS	F1 MSD Qualifier F1 MS	Unit mg/Kg	Clien	<u>D</u>	%Rec 116 Client	: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec	Type: S	RPE Limi 20 Spike
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Chloride	1180 I-C MSD Sample Result 1180 O-B MS Sample Result 7220	F1 Sample Qualifier F1 Sample	Spike Added 1250 Spike Added	2629 MSD Result 2627 MS Result	F1 MSD Qualifier F1 MS	Unit mg/Kg Unit mg/Kg		<u>D</u>	%Rec 116 Client %Rec 103 103	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits	Type: S <u>RPD</u> 0 : Matrix Type: S	RPI Limi 2 Spike
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9	1180 I-C MSD Sample Result 1180 O-B MS Sample Result 7220	F1 Sample Qualifier F1 Sample	Spike Added 1250 Spike Added	2629 MSD Result 2627 MS Result	F1 MSD Qualifier F1 MS	Unit mg/Kg Unit mg/Kg		<u>D</u>	%Rec 116 Client %Rec 103 103	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp	Type: S <u>RPD</u> 0 : Matrix Type: S	Coluble RPI Limi 20 Coluble Coluble
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte	1180 I-C MSD Sample Result 1180 O-B MS Sample Result 7220	F1 Sample Qualifier F1 Sample	Spike Added 1250 Spike Added	2629 MSD Result 2627 MS Result	F1 MSD Qualifier F1 MS	Unit mg/Kg Unit mg/Kg		<u>D</u>	%Rec 116 Client %Rec 103 103	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp	Type: S <u>RPD</u> 0 : Matrix Type: S 	Coluble RPI Limi 20 Coluble Coluble
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid	1180 I-C MSD Sample Result 1180 O-B MS Sample Result 7220	F1 Sample Qualifier F1 Sample Qualifier	Spike Added 1250 Spike Added	MSD Result 2627 MS Result 9833	F1 MSD Qualifier F1 MS	Unit mg/Kg Unit mg/Kg		<u>D</u>	%Rec 116 Client %Rec 103	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp	Type: S <u>RPD</u> 0 : Matrix Type: S 	Soluble Limi 20 Soluble plicate Soluble
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175	1180 I-C MSD Sample Result 1180 O-B MS Sample Result 7220 O-C MSD Sample	F1 Sample Qualifier F1 Sample Qualifier	1250 Spike Added 1250 Spike Added 2530	2629 MSD Result 2627 MS Result 9833	F1 MSD Qualifier F1 MS Qualifier	Unit mg/Kg Unit mg/Kg		<u>D</u>	%Rec 116 Client %Rec 103	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 e: Matrix Sp Prep	Type: S <u>RPD</u> 0 : Matrix Type: S 	Soluble Limi 20 Soluble Soluble RPI
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Analysis Batch: 72175 Analyte	1180 I-C MSD Sample Result 1180 O-B MS Sample Result 7220 O-C MSD Sample	F1 Sample Qualifier F1 Sample Qualifier Sample	1250 Spike Added 1250 Spike Added 2530	2629 MSD Result 2627 MS Result 9833	F1 MSD Qualifier F1 MS Qualifier	Unit mg/Kg Unit mg/Kg		D	mple ID %Rec 116 Client %Rec 103 mple ID	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp Prep %Rec	Type: S <u>RPD</u> 0 : Matrix Type: S Dike Du	Coluble RPI Limi 20 Coluble Coluble Coluble RPI Limi
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride	1180 Sample Result 1180 O-B MS Sample Result 7220 O-C MSD Sample Result 7220	F1 Sample Qualifier F1 Sample Qualifier Sample	1250 Spike Added 1250 Spike Added 2530 Spike Added	2629 MSD Result 2627 MS Result 9833 MSD Result	F1 MSD Qualifier F1 MS Qualifier	Unit mg/Kg Unit Unit		D	%Rec 116 Client %Rec 103 mple ID %Rec 104	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 e: Matrix Sp Prep %Rec Limits 90 - 110	Type: S RPD 0 : Matrix Type: S bike Du Type: S RPD 0 0	Soluble RPI Limi 2 Soluble Soluble RPI Limi 2
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: MB 880-71972	1180 Sample Result 1180 O-B MS Sample Result 7220 O-C MSD Sample Result 7220	F1 Sample Qualifier F1 Sample Qualifier Sample	1250 Spike Added 1250 Spike Added 2530 Spike Added	2629 MSD Result 2627 MS Result 9833 MSD Result	F1 MSD Qualifier F1 MS Qualifier	Unit mg/Kg Unit Unit		D	%Rec 116 Client %Rec 103 mple ID %Rec 104	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp Prep %Rec Limits 90 - 110	Type: S <u>RPD</u> 0 : Matrix Type: S Dike Du Type: S <u>RPD</u> 0 Method	Coluble RPI Limi 20 Soluble Soluble RPI Limi 20 Limi 20
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: MB 880-71972 Matrix: Solid	1180 Sample Result 1180 O-B MS Sample Result 7220 O-C MSD Sample Result 7220	F1 Sample Qualifier F1 Sample Qualifier Sample	1250 Spike Added 1250 Spike Added 2530 Spike Added	2629 MSD Result 2627 MS Result 9833 MSD Result	F1 MSD Qualifier F1 MS Qualifier	Unit mg/Kg Unit Unit		D	%Rec 116 Client %Rec 103 mple ID %Rec 104	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp Prep %Rec Limits 90 - 110	Type: S RPD 0 : Matrix Type: S bike Du Type: S RPD 0 0	Coluble RPE Limi 20 Coluble Coluble Coluble RPE Limi 20 Limi 20
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: MB 880-71972 Matrix: Solid	1180 Sample Result 1180 O-B MS Sample Result 7220 O-C MSD Sample Result 7220	F1 Sample Qualifier F1 Sample Qualifier Sample	1250 Spike Added 1250 Spike Added 2530 Spike Added	2629 MSD Result 2627 MS Result 9833 MSD Result	F1 MSD Qualifier F1 MS Qualifier	Unit mg/Kg Unit Unit		D	%Rec 116 Client %Rec 103 mple ID %Rec 104	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp Prep %Rec Limits 90 - 110	Type: S RPD 0 Matrix Type: S Dike Du Type: S RPD 0 Method	Coluble RPC Limi 20 Coluble Coluble Coluble Coluble RPC Limi 20 Limi 20
Chloride Lab Sample ID: 880-38562-A-1 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: 880-38610-A-9 Matrix: Solid Analysis Batch: 72175 Analyte Chloride Lab Sample ID: MB 880-71972	1180 I-C MSD Sample Result 1180 D-B MS Sample Result 7220 D-C MSD Sample Result 7220	F1 Sample Qualifier Gualifier Sample Qualifier Qualifier	1250 Spike Added 1250 Spike Added 2530 Spike Added 2530	2629 MSD Result 2627 MS Result 9833 MSD Result	F1 MSD Qualifier F1 MS Qualifier	Unit mg/Kg Unit Unit		D	%Rec 116 Client %Rec 103 mple ID %Rec 104	e: Matrix Sp Prep %Rec Limits 90 - 110 Sample ID Prep %Rec Limits 90 - 110 : Matrix Sp Prep %Rec Limits 90 - 110	Type: S RPD 0 : Matrix Type: S Dike Du Type: S RPD 0 Method Type: S	Coluble RPC Limi 20 Coluble Coluble Coluble Coluble RPC Limi 20 Limi 20

Client: Vertex

Project/Site: JRU DI 1A CTB

Job ID: 890-6053-1 SDG: 23E-04616

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-71972/2-A							Client	Sample	D: Lab C	ontrol S	ample
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72255											
-			Spike	LCS	LCS				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride			250	259.7		mg/Kg		104	90 - 110		
Lab Sample ID: LCSD 880-71972/3-A						Clie	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid									Prep	Type: Se	oluble
Analysis Batch: 72255											
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	258.3		mg/Kg		103	90 - 110	1	20
Lab Sample ID: 890-6050-A-1-B MS								Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: Se	oluble
Analysis Batch: 72255											
\$	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	821		2520	3445		mg/Kg		104	90 _ 110		
Lab Sample ID: 890-6050-A-1-C MSD)					CI	ient Sa	ample IC): Matrix S	pike Dup	olicate
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72255											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	821		2520	3456		mg/Kg		105	90 _ 110	0	20
Lab Sample ID: 890-6052-A-3-C MS								Client	Sample ID	: Matrix	Spike
Matrix: Solid									Prep	Type: Se	oluble
Analysis Batch: 72255											
\$	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	52.3		251	316.9		mg/Kg		105	90 - 110		
Lab Sample ID: 890-6052-A-3-D MSD)					CI	ient Sa	ample IC): Matrix S	pike Dup	olicate
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72255						~ 5		
		Sample	Spike	MSD	MSD		_	~·-	%Rec		RPD
Analyte		Qualifier	Added		Qualifier	Unit	<u>D</u>	%Rec	Limits	RPD	Limit
Chloride	52.3		251	315.8		mg/Kg		105	90 - 110	0	20

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QC Association Summary

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Job ID: 890-6053-1 SDG: 23E-04616

GC VOA

Prep Batch: 72417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batcl
890-6053-1	BH24-11	Total/NA	Solid	5035	
890-6053-2	BH24-11	Total/NA	Solid	5035	
890-6053-3	BH24-12	Total/NA	Solid	5035	
890-6053-4	BH24-12	Total/NA	Solid	5035	
890-6053-5	BH24-13	Total/NA	Solid	5035	
890-6053-6	BH24-13	Total/NA	Solid	5035	
890-6053-7	BH24-13	Total/NA	Solid	5035	
890-6053-8	BH24-14	Total/NA	Solid	5035	
890-6053-9	BH24-14	Total/NA	Solid	5035	
890-6053-10	BH24-15	Total/NA	Solid	5035	
MB 880-72417/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72417/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72417/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6053-1 MS	BH24-11	Total/NA	Solid	5035	
890-6053-1 MSD	BH24-11	Total/NA	Solid	5035	

Analysis Batch: 72621

890-6053-7	BH24-13	Total/NA	Solid	5035		
890-6053-8	BH24-14	Total/NA	Solid	5035		8
890-6053-9	BH24-14	Total/NA	Solid	5035		
890-6053-10	BH24-15	Total/NA	Solid	5035		9
MB 880-72417/5-A	Method Blank	Total/NA	Solid	5035		
LCS 880-72417/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-72417/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-6053-1 MS	BH24-11	Total/NA	Solid	5035		
890-6053-1 MSD	BH24-11	Total/NA	Solid	5035		
analysis Batch: 72621						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	10
890-6053-1	BH24-11	Total/NA	Solid	8021B	72417	13
890-6053-2	BH24-11	Total/NA	Solid	8021B	72417	
890-6053-3	BH24-12	Total/NA	Solid	8021B	72417	
890-6053-4	BH24-12	Total/NA	Solid	8021B	72417	
890-6053-5	BH24-13	Total/NA	Solid	8021B	72417	
890-6053-6	BH24-13	Total/NA	Solid	8021B	72417	
890-6053-7	BH24-13	Total/NA	Solid	8021B	72417	
890-6053-8	BH24-14	Total/NA	Solid	8021B	72417	
890-6053-9	BH24-14	Total/NA	Solid	8021B	72417	
890-6053-10	BH24-15	Total/NA	Solid	8021B	72417	
MB 880-72417/5-A	Method Blank	Total/NA	Solid	8021B	72417	
LCS 880-72417/1-A	Lab Control Sample	Total/NA	Solid	8021B	72417	
LCSD 880-72417/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72417	
890-6053-1 MS	BH24-11	Total/NA	Solid	8021B	72417	
890-6053-1 MSD	BH24-11	Total/NA	Solid	8021B	72417	
-						

Analysis Batch: 72730

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6053-1	BH24-11	Total/NA	Solid	Total BTEX	
890-6053-2	BH24-11	Total/NA	Solid	Total BTEX	
890-6053-3	BH24-12	Total/NA	Solid	Total BTEX	
890-6053-4	BH24-12	Total/NA	Solid	Total BTEX	
890-6053-5	BH24-13	Total/NA	Solid	Total BTEX	
890-6053-6	BH24-13	Total/NA	Solid	Total BTEX	
890-6053-7	BH24-13	Total/NA	Solid	Total BTEX	
890-6053-8	BH24-14	Total/NA	Solid	Total BTEX	
890-6053-9	BH24-14	Total/NA	Solid	Total BTEX	
890-6053-10	BH24-15	Total/NA	Solid	Total BTEX	

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QC Association Summary

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Job ID: 890-6053-1 SDG: 23E-04616

GC Semi VOA

Analysis Batch: 17706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6053-1	BH24-11	Total/NA	Solid	8015B NM	17962
890-6053-5	BH24-13	Total/NA	Solid	8015B NM	17962
890-6053-7	BH24-13	Total/NA	Solid	8015B NM	17962
890-6053-8	BH24-14	Total/NA	Solid	8015B NM	17962
890-6053-10	BH24-15	Total/NA	Solid	8015B NM	17962
MB 870-17962/3-A	Method Blank	Total/NA	Solid	8015B NM	17962
LCS 870-17962/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17962
LCSD 870-17962/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17962
890-6046-A-1-M MS	Matrix Spike	Total/NA	Solid	8015B NM	17962
890-6046-A-1-N MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17962

Prep Batch: 17962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6053-1	BH24-11	Total/NA	Solid	8015NM Prep	
890-6053-2	BH24-11	Total/NA	Solid	8015NM Prep	
890-6053-3	BH24-12	Total/NA	Solid	8015NM Prep	
890-6053-4	BH24-12	Total/NA	Solid	8015NM Prep	
890-6053-5	BH24-13	Total/NA	Solid	8015NM Prep	
890-6053-6	BH24-13	Total/NA	Solid	8015NM Prep	
890-6053-7	BH24-13	Total/NA	Solid	8015NM Prep	
890-6053-8	BH24-14	Total/NA	Solid	8015NM Prep	
890-6053-9	BH24-14	Total/NA	Solid	8015NM Prep	
890-6053-10	BH24-15	Total/NA	Solid	8015NM Prep	
MB 870-17962/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17962/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17962/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6046-A-1-M MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6046-A-1-N MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17988

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6053-2	BH24-11	Total/NA	Solid	8015B NM	17962
890-6053-3	BH24-12	Total/NA	Solid	8015B NM	17962
890-6053-4	BH24-12	Total/NA	Solid	8015B NM	17962
890-6053-6	BH24-13	Total/NA	Solid	8015B NM	17962
890-6053-9	BH24-14	Total/NA	Solid	8015B NM	17962

Analysis Batch: 17991

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Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6053-1	BH24-11	Total/NA	Solid	8015 NM	
890-6053-2	BH24-11	Total/NA	Solid	8015 NM	
890-6053-3	BH24-12	Total/NA	Solid	8015 NM	
890-6053-4	BH24-12	Total/NA	Solid	8015 NM	
890-6053-5	BH24-13	Total/NA	Solid	8015 NM	
890-6053-6	BH24-13	Total/NA	Solid	8015 NM	
890-6053-7	BH24-13	Total/NA	Solid	8015 NM	
890-6053-8	BH24-14	Total/NA	Solid	8015 NM	
890-6053-9	BH24-14	Total/NA	Solid	8015 NM	
890-6053-10	BH24-15	Total/NA	Solid	8015 NM	

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QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB

Job ID: 890-6053-1 SDG: 23E-04616

HPLC/IC

Leach Batch: 71959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6053-8	BH24-14	Soluble	Solid	DI Leach	
890-6053-9	BH24-14	Soluble	Solid	DI Leach	
890-6053-10	BH24-15	Soluble	Solid	DI Leach	
MB 880-71959/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71959/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71959/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-38562-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-38562-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-38610-A-9-B MS	Matrix Spike	Soluble	Solid	DI Leach	_
880-38610-A-9-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
Leach Batch: 71972					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6053-1	BH24-11	Soluble	Solid	DI Leach	
890-6053-2	BH24-11	Soluble	Solid	DI Leach	
890-6053-3	BH24-12	Soluble	Solid	DI Leach	
890-6053-4	BH24-12	Soluble	Solid	DI Leach	
890-6053-5	BH24-13	Soluble	Solid	DI Leach	
890-6053-6	BH24-13	Soluble	Solid	DI Leach	
900 6052 7	DU04 12	Solublo	Solid	DLLooob	

Leach Batch: 71972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6053-1	BH24-11	Soluble	Solid	DI Leach	
890-6053-2	BH24-11	Soluble	Solid	DI Leach	
890-6053-3	BH24-12	Soluble	Solid	DI Leach	
890-6053-4	BH24-12	Soluble	Solid	DI Leach	
890-6053-5	BH24-13	Soluble	Solid	DI Leach	
890-6053-6	BH24-13	Soluble	Solid	DI Leach	
890-6053-7	BH24-13	Soluble	Solid	DI Leach	
MB 880-71972/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-71972/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6050-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6050-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-6052-A-3-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-6052-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 72175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6053-8	BH24-14	Soluble	Solid	300.0	71959
890-6053-9	BH24-14	Soluble	Solid	300.0	71959
890-6053-10	BH24-15	Soluble	Solid	300.0	71959
MB 880-71959/1-A	Method Blank	Soluble	Solid	300.0	71959
LCS 880-71959/2-A	Lab Control Sample	Soluble	Solid	300.0	71959
LCSD 880-71959/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71959
880-38562-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	71959
880-38562-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71959
880-38610-A-9-B MS	Matrix Spike	Soluble	Solid	300.0	71959
880-38610-A-9-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71959

Analysis Batch: 72255

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6053-1	BH24-11	Soluble	Solid	300.0	71972
890-6053-2	BH24-11	Soluble	Solid	300.0	71972
890-6053-3	BH24-12	Soluble	Solid	300.0	71972
890-6053-4	BH24-12	Soluble	Solid	300.0	71972
890-6053-5	BH24-13	Soluble	Solid	300.0	71972
890-6053-6	BH24-13	Soluble	Solid	300.0	71972
890-6053-7	BH24-13	Soluble	Solid	300.0	71972
MB 880-71972/1-A	Method Blank	Soluble	Solid	300.0	71972

QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6053-1 SDG: 23E-04616

HPLC/IC (Continued)

Analysis Batch: 72255 (Continued)

alysis Batch: 72255					
ab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
CS 880-71972/2-A	Lab Control Sample	Soluble	Solid	300.0	71972
CSD 880-71972/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	71972
00-6050-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	71972
0-6050-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71972
0-6052-A-3-C MS	Matrix Spike	Soluble	Solid	300.0	71972
0-6052-A-3-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	71972

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9

Job ID: 890-6053-1 SDG: 23E-04616

Lab Sample ID: 890-6053-1 Matrix: Solid

Lab Sample ID: 890-6053-2

Matrix: Solid

Date Collected: 01/25/24 10:20 Date Received: 01/29/24 11:47

Client Sample ID: BH24-11

Project/Site: JRU DI 1A CTB

Client: Vertex

	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	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 11:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 11:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			17991	02/04/24 18:05	СС	EET DAL
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17706	02/04/24 18:05	WP	EET DAL
Soluble	Leach	DI Leach			5.02 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		5			72255	02/04/24 06:14	СН	EET MID

Client Sample ID: BH24-11

Date Collected: 01/25/24 10:30

Date Received: 01/29/24 11:47

	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	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 12:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 12:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			17991	02/13/24 12:23	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 12:23	WP	EET DAL
Soluble	Leach	DI Leach			4.96 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		5			72255	02/04/24 06:21	СН	EET MID

Client Sample ID: BH24-12 Date Collected: 01/25/24 10:40

Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 12:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 12:25	SM	EET MID
Total/NA	Analysis	8015 NM		1			17991	02/13/24 12:44	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 12:44	WP	EET DAL
Soluble	Leach	DI Leach			5.00 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		5			72255	02/04/24 06:28	CH	EET MID

Client Sample ID: BH24-12 Date Collected: 01/25/24 10:50 Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 12:46	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 12:46	SM	EET MID

Eurofins Carlsbad

Matrix: Solid

Lab Sample ID: 890-6053-3 Matrix: Solid

Lab Sample ID: 890-6053-4

Released to Imaging: 5/10/2024 11:00:40 AM

Lab Chronicle

Job ID: 890-6053-1 SDG: 23E-04616

Lab Sample ID: 890-6053-4 Matrix: Solid

Lab Sample ID: 890-6053-5

Lab Sample ID: 890-6053-6

Lab Sample ID: 890-6053-7

Matrix: Solid

Matrix: Solid

Matrix: Solid

Date Collected: 01/25/24 10:50 Date Received: 01/29/24 11:47

Client Sample ID: BH24-12

Project/Site: JRU DI 1A CTB

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			17991	02/13/24 13:05	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17988	02/13/24 13:05	WP	EET DAL
Soluble	Leach	DI Leach			5.05 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		5			72255	02/04/24 06:34	CH	EET MID

Client Sample ID: BH24-13

Date Collected: 01/25/24 11:00 Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 13:07	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 13:07	SM	EET MID
Total/NA	Analysis	8015 NM		1			17991	02/04/24 19:28	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17706	02/04/24 19:28	WP	EET DAL
Soluble	Leach	DI Leach			5.03 g	50 mL	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		5			72255	02/04/24 06:41	CH	EET MID

Client Sample ID: BH24-13

Date Collected: 01/25/24 11:10 Date Received: 01/29/24 11:47

Batch Batch Dil Initial Final Batch Prepared Method Prep Type Туре Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 5.02 g 5 mL 72417 02/05/24 15:57 MNR EET MID Total/NA 8021B 5 mL 5 mL 72621 02/08/24 13:27 MNR EET MID Analysis 1 Total/NA Total BTEX Analysis 1 72730 02/08/24 13:27 SM EET MID Total/NA Analysis 8015 NM 17991 02/13/24 13:25 СС EET DAL 1 01/30/24 14:56 Total/NA Prep 8015NM Prep 10.09 g 10 mL 17962 WP EET DAL Total/NA Analysis 8015B NM 1 uL 1 uL 17988 02/13/24 13:25 WP EET DAL 1 Soluble Leach DI Leach 4.96 g 50 mL 71972 01/30/24 15:01 SMC EET MID Soluble Analysis 300.0 5 72255 02/04/24 06:48 СН EET MID

Client Sample ID: BH24-13

Date Collected: 01/25/24 11:20 Date Received: 01/29/24 11:47

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 13:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 13:48	SM	EET MID
Total/NA	Analysis	8015 NM		1			17991	02/04/24 20:09	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.97 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17706	02/04/24 20:09	WP	EET DAL

Eurofins Carlsbad

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Lab Chronicle

Job ID: 890-6053-1 SDG: 23E-04616

Matrix: Solid

Matrix: Solid

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Lab Sample ID: 890-6053-7

Lab Sample ID: 890-6053-8

Client Sample ID: BH24-13 Date Collected: 01/25/24 11:20

Project/Site: JRU DI 1A CTB

Client: Vertex

Date Received: 01/29/24 11:47

	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	71972	01/30/24 15:01	SMC	EET MID
Soluble	Analysis	300.0		10			72255	02/04/24 06:55	СН	EET MID

Client Sample ID: BH24-14

Date Collected: 01/25/24 11:30 Date Received: 01/29/24 11:47

	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	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 14:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 14:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			17991	02/04/24 20:30	СС	EET DAL
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17706	02/04/24 20:30	WP	EET DAL
Soluble	Leach	DI Leach			5.00 g	50 mL	71959	01/30/24 14:29	SMC	EET MID
Soluble	Analysis	300.0		5			72175	02/03/24 17:50	СН	EET MID

Client Sample ID: BH24-14 Date Collected: 01/25/24 11:40 Date Received: 01/29/24 11:47

Batch Dil Initial Final Batch Batch Prepared Prep Type Туре Method Run Factor Amount Amount Number or Analyzed Analyst Lab Total/NA Prep 5035 4.97 g 5 mL 72417 02/05/24 15:57 MNR EET MID 8021B Total/NA 5 mL 5 mL 02/08/24 14:29 MNR EET MID Analysis 1 72621 Total/NA Analysis Total BTEX 1 72730 02/08/24 14:29 SM EET MID Total/NA Analysis 8015 NM 1 17991 02/13/24 13:46 СС EET DAL Prep Total/NA 8015NM Prep 10.01 g 10 mL 17962 01/30/24 14:56 WP EET DAL Total/NA EET DAL Analysis 8015B NM 1 1 uL 1 uL 17988 02/13/24 13:46 WP Soluble Leach DI Leach 4.98 g 50 mL 71959 01/30/24 14:29 SMC EET MID Soluble Analysis 300.0 1 72175 02/03/24 17:55 СН EET MID

Client Sample ID: BH24-15 Date Collected: 01/25/24 11:50

Lab Sample ID: 890-6053-10 Matrix: Solid

Date Received: 01/29/24 11:47

	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	72417	02/05/24 15:57	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72621	02/08/24 14:49	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72730	02/08/24 14:49	SM	EET MID
Total/NA	Analysis	8015 NM		1			17991	02/04/24 21:11	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	17962	01/30/24 14:56	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17706	02/04/24 21:11	WP	EET DAL
Soluble	Leach	DI Leach			4.96 g	50 mL	71959	01/30/24 14:29	SMC	EET MID
Soluble	Analysis	300.0		5			72175	02/03/24 18:00	СН	EET MID

Eurofins Carlsbad

Matrix: Solid

Lab Sample ID: 890-6053-9

Lab Chronicle

Client: Vertex Project/Site: JRU DI 1A CTB

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300 EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440 Job ID: 890-6053-1 SDG: 23E-04616

8 9 10

Accreditation/Certification Summary

Client: Vertex
Project/Site: JRU DI 1A CTE

Job ID: 890-6053-1 SDG: 23E-04616

Laboratory: Eurofins Dallas

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Texas NELAP T104704295-23-34 06-30-24

Laboratory: Eurofins Midland

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

uthority	Program		Identification Number	Expiration Date
exas	NELAP		T104704400-23-26	06-30-24
The following applyte	are included in this report, but the l	boratory is not cortifio	d by the governing authority. This li	st may include analytes
0,	1 /	aboratory is not certified	ed by the governing authority. This li	st may include analytes
0,	are included in this report, but the la loes not offer certification.	aboratory is not certified	d by the governing authority. This li	st may include analytes
0,	1 /	aboratory is not certified Matrix	ed by the governing authority. This lis Analyte	st may include analytes

Method Summary

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6053-1 SDG: 23E-04616

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
0.00	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET DAL
I Leach	Deionized Water Leaching Procedure	ASTM	EET MID
	ASTM International		
	Environmental Protection Agency		
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third E	dition, November 1986 And Its Updates.	
TAL SOP	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences:		
EET DAL	= Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300		
EET MID	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Laboratory References:

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex Project/Site: JRU DI 1A CTB

Job ID: 890-6053-1
SDG: 23E-04616

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-6053-1	BH24-11	Solid	01/25/24 10:20	01/29/24 11:47
890-6053-2	BH24-11	Solid	01/25/24 10:30	01/29/24 11:47
890-6053-3	BH24-12	Solid	01/25/24 10:40	01/29/24 11:47
890-6053-4	BH24-12	Solid	01/25/24 10:50	01/29/24 11:47
890-6053-5	BH24-13	Solid	01/25/24 11:00	01/29/24 11:47
890-6053-6	BH24-13	Solid	01/25/24 11:10	01/29/24 11:47
890-6053-7	BH24-13	Solid	01/25/24 11:20	01/29/24 11:47
890-6053-8	BH24-14	Solid	01/25/24 11:30	01/29/24 11:47
890-6053-9	BH24-14	Solid	01/25/24 11:40	01/29/24 11:47
890-6053-10	BH24-15	Solid	01/25/24 11:50	01/29/24 11:47

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	Chain of Custody Houston IX (381) 240-4200. Dallas, TX (214) 902-0300 Motion IX (381) 240-4200. Dallas, TX (214) 902-0301 Motion IX (381) 240-4200. Dallas, TX (214) 902-0301 Motion IX (381) 240-4200. Dallas, TX (214) 902-0301 Motion IX (381) 240-4200. Dallas, TX (216) 585-3443. Lubbock (TX (800) 744-129 Motion IX (381) 240-4200. Dallas, TX (214) 920-0301 Motion IX (381) 585-3443. Lubbock (TX (800) 744-129 Motion IX (375) 392-7550. Carisbad, IMI (575) 982-3199 OUN_X Motion IX (381) 585-3443. Lubbock (TX (800) 741-120 Motion IX (381) 510-000 Motion IX (381) 740-000 Motion IX (381) 740-000		Custody Dallas, TX (214) 902-0300 Antonio, TX (210) 509-3334 bbock, TX (210) 509-334 bbock, TX (210) 509-370 bbock, TX (210) 500-370 bbock, TX	Vork Order	T/PST PRP	Reporting: Level II Level III PST/UST TREP 1 Aviel IV		ANALYSIS REQUEST Preservative Codes	None: NO DI Water: H ₂ O	Cool: Cool MeOH:Me HCL:HC HNO 3:HN	H3P04:H3	NaHSO 2: MABIS	Zn Acetate+NaOH; Zn	MaOH+Ascorbic Acid: SAPC	Sample Comments							Se Ag SiO ₂ Na Sr TI Sn U	and subcontractors. It assigns standard terms and conditions and subcontractors. It assigns standard terms and conditions analyzed. These terms will be activised beyond the control	regined his (Cianation)	2	*
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Chain of Custo dv Record

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Ver: 06/08/2021

Received by OCD: 4/29/2024 11:25:14 AM

Note: Since laboratory accreditations are subject to change. Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our 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 compliance 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 compliance to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment Testing South Central, the sample should be brought to Eurofins Environment to the testing to the function the sample should be Project Name: JRU DI 1A CTB State, Zip: TX, 75220 Dallas Empty Kit Relinquished by: Deliverable Requested: I, II, III, IV, Other (specify) Possible Hazard Identification BH24-15 (890-6053-10) Sample Identification - Client ID (Lab ID) Emai Midland, TX 79701 **Eurofins Midland** Relinquished by: 214-902-0300(Tel) 9701 Harry Hines Blvd, Eurofins Environment Testing South Centr Phone: 432-704-5440 1211 W. Florida Ave elinquished by: Shipping/Receiving Inconfirmed none Custody Seals Intact: ∆ Yes ∆ No elinquished by ent Contact lient Information pairy Custody Seal No. (Sub Contract Lab) Healty Project #: 89000161 Sampler Due Date Requested: 2/2/2024 Date/Time Primary Deliverable Rank: 2 WO #: Phone ALL UL PO # TAT Requested (days): Jate/ I Ime Sample Date SOW#: 1/25/24 Chain of Custody Record Date: Mountain Sample 11:50 Time leb (C=comp, o=waste/oll, G=grab) BT=Tissue, A=Air Sample Preservation Code: Type Company Company Company (W=water, S=solid, Matrix Solid E-Mail: Kramer, Jessica Jessica.Kramer@et.eurofinsus.com _ab PM Time: Field Filtered Sample (Yes or No) **NELAP - Texas** occreditations Required (See note): Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For Month Perform MS/MSD (Yes or No) Special Instructions/QC Requirements 8015MOD_Calc Cooler Temperature(s) °C and Other Remarks: Received by: Received by: Received by: × 8015MOD_NM/8015NM_S_Prep × Analysis Requested B State of Origin: New Mexico Carrier Tracking No(s): Method of Shipment Date/Inne/ Date/Time Jale/ 7 **Total Number of containers** 🔅 eurofins I - Ice J - DI Water K - EDTA L - EDA A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH Page 2 of 2 COC No: 880-9089.2 G - Amchlor H - Ascorbic Acid Preservation Codes: 890-6053-1 Other: 00 # Special Instructions/Note: Q L -V - MCAA W - pH 4-5 Y - Trizma N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 U - Acetone S - H2SO4 T - TSP Dodecahydrate ≤ R - Na2S2O3 Z - other (specify) Company Company **Environment Testing** Ver: 06/08/2021 Company Hexane Months

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Login Sample Receipt Checklist

Client: Vertex

Login Number: 6053 List Number: 1 Creator: Lopez, Abraham

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

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Job Number: 890-6053-1 SDG Number: 23E-04616

List Source: Eurofins Carlsbad

Job Number: 890-6053-1 SDG Number: 23E-04616

List Source: Eurofins Dallas

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6053 List Number: 3 Creator: Dabinett, lan

List Number: 3		List Creation: 02/02/24 12:43 PM	5
Creator: Dabinett, Ian			
Question	Answer	Comment	
The cooler's custody seal, if present, is intact.	N/A		
Sample custody seals, if present, are intact.	N/A		
The cooler or samples do not appear to have been compromised or tampered with.	True		8
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		9
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.	False	COC not relinquished.	
Is the Field Sampler's name present on COC?	N/A		
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		13
Sample containers have legible labels.	True		14
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		

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

14

Job Number: 890-6053-1 SDG Number: 23E-04616

List Source: Eurofins Midland

List Creation: 01/30/24 10:34 AM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6053 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/12/2024 12:33:43 PM

JOB DESCRIPTION

JRU DI 1A CTB 23E-04616

JOB NUMBER

890-6072-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notes and contact information.



Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/12/2024 12:33:43 PM

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

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Definitions/Glossary

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Client: Vertex	Job ID: 890-6072-1 RU DI 1A CTB 23E-04616	2
-		
Qualifiers		3
GC VOA Qualifier	Qualifier Description	4
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	5
S1-	Surrogate recovery exceeds control limits, low biased.	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	8
S1+	Surrogate recovery exceeds control limits, high biased.	0
U	Indicates the analyte was analyzed for but not detected.	Q
HPLC/IC		3
Qualifier	Qualifier Description	
U	Indicates the analyte was analyzed for but not detected.	
Glossary		
Abbreviation	These commonly used abbreviations may or may not be present in this report.	
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	
%R	Percent Recovery	10
CFL	Contains Free Liquid	13
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	

Method Detection Limit

Minimum Level (Dioxin)

Most Probable Number

Not Calculated

Negative / Absent

Positive / Present

Presumptive

Quality Control

Method Quantitation Limit

Practical Quantitation Limit

Relative Error Ratio (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Too Numerous To Count

Toxicity Equivalent Quotient (Dioxin)

Reporting Limit or Requested Limit (Radiochemistry)

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

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

MDL

MPN

MQL

NC

ND

NEG

POS

PQL

PRES

QC

RL RPD

TEF

TEQ

TNTC

RER

ML

Case Narrative

Job ID: 890-6072-1

Client: Vertex Project: JRU DI 1A CTB 23E-04616

Eurofins Carlsbad

Job ID: 890-6072-1

Job Narrative 890-6072-1

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Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/30/2024 3:46 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 1.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH24-16 (890-6072-1), BH24-16 (890-6072-2), BH24-9 (890-6072-3), BH24-11 (890-6072-4) and BH24-12 (890-6072-5).

GC VOA

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCSD 880-72364/2-A). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-72364 and analytical batch 880-72580 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-72364 and analytical batch 880-72580 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (CCV 880-72580/20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-72185 and analytical batch 880-72459 was outside the control limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (LCS 880-72184/1-A). Evidence of matrix interferences is not obvious.

Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-38450-A-1-F MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-72184 and analytical batch 880-72459 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 870-17917 and analytical batch 870-17989 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (880-38742-A-61-N MS) and

Case Narrative

Job ID: 890-6072-1

Project: JRU DI 1A CTB 23E-04616

Job ID: 890-6072-1 (Continued)	Eurofins Carlsbad
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(880-38742-A-61-O MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside the upper control limit: BH24-16 (890-6072-1), BH24-16 (890-6072-2), BH24-9 (890-6072-3), BH24-11 (890-6072-4), BH24-12 (890-6072-5), (MB 870-17917/3-A) and (880-38742-A-61-M). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

Client: Vertex

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.
Job ID: 890-6072-1

Matrix: Solid

5

Lab Sample ID: 890-6072-1

Client: Vertex
Project/Site: JRU DI 1A CTB 23E-04616

Client Sample ID: BH24-16

Date Collected: 01/26/24 12:00 Date Received: 01/30/24 15:46

Sample Depth: 0

epth: 0

	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/07/24 11:42	02/08/24 04:48	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/07/24 11:42	02/08/24 04:48	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/07/24 11:42	02/08/24 04:48	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/07/24 11:42	02/08/24 04:48	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/07/24 11:42	02/08/24 04:48	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/07/24 11:42	02/08/24 04:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	121		70 - 130			02/07/24 11:42	02/08/24 04:48	1
1,4-Difluorobenzene (Surr)	86		70 - 130			02/07/24 11:42	02/08/24 04:48	1
Method: TAL SOP Total BTEX -	Total BTEX Calo	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/08/24 04:48	1
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (GC)					
Analyte					D	Durante	A	D11 E
Analyte	Result	Qualifier	RL	Unit	U	Prepared	Analyzed	DII Fac
Total TPH			49.9	mg/Kg		Prepared	02/07/24 05:26	Dil Fac
Total TPH	<49.9	U	49.9			Prepared		1
	<49.9 sel Range Orga	U	49.9		<u>D</u>	Prepared		1
Total TPH Method: SW846 8015B NM - Die	<49.9 sel Range Orga	U Inics (DRO) Qualifier	49.9	mg/Kg			02/07/24 05:26	1 Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte	<49.9 sel Range Orga Result	U Inics (DRO) Qualifier U	49.9 (GC) RL	mg/Kg Unit		Prepared	02/07/24 05:26	1 Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28)	<49.9 sel Range Orga Result <49.9 <49.9	U nics (DRO) Qualifier U U	49.9 (GC) <u>RL</u> 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/02/24 09:58 02/02/24 09:58	02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26	1 Dil Fac 1 1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28)	<49.9 esel Range Orga Result <49.9	U nics (DRO) Qualifier U U	49.9 (GC) <u>RL</u> 49.9	mg/Kg Unit mg/Kg		Prepared 02/02/24 09:58	02/07/24 05:26 Analyzed 02/07/24 05:26	1 Dil Fac 1 1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36)	<49.9 sel Range Orga Result <49.9 <49.9	U nnics (DRO) Qualifier U U U	49.9 (GC) <u>RL</u> 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/02/24 09:58 02/02/24 09:58	02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26	1 Dil Fac 1 1 1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over	<49.9 sel Range Orga Result <49.9 <49.9 <49.9	U nnics (DRO) Qualifier U U U	49.9 (GC) <u>RL</u> 49.9 49.9 49.9	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/02/24 09:58 02/02/24 09:58 02/02/24 09:58	02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26 02/07/24 05:26	1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate	 <49.9 sel Range Orga Result <49.9 <49.9<td>U nics (DRO) Qualifier U U U Qualifier</td><td>49.9 (GC) <u>RL</u> 49.9 49.9 49.9 <u>Limits</u></td><td>mg/Kg Unit mg/Kg mg/Kg</td><td></td><td>Prepared 02/02/24 09:58 02/02/24 09:58 02/02/24 09:58 Prepared</td><td>02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26 02/07/24 05:26 Analyzed</td><td>Dil Fac 1 1 1 1 <i>Dil Fac</i> 1</td>	U nics (DRO) Qualifier U U U Qualifier	49.9 (GC) <u>RL</u> 49.9 49.9 49.9 <u>Limits</u>	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/02/24 09:58 02/02/24 09:58 02/02/24 09:58 Prepared	02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26 02/07/24 05:26 Analyzed	Dil Fac 1 1 1 1 <i>Dil Fac</i> 1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane	 <49.9 sel Range Orga Result <49.9 <45 	U unics (DRO) Qualifier U U U U Qualifier S1+ S1+	49.9 (GC) RL 49.9 49.9 49.9 49.9 <u>Limits</u> 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/02/24 09:58 02/02/24 09:58 02/02/24 09:58 Prepared 02/02/24 09:58	02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26 02/07/24 05:26 Analyzed 02/07/24 05:26	Dil Fac 1 1 1 Dil Fac
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl	 <49.9 sel Range Orga Result <49.9 <49.9 <49.9 <49.9 <49.9 <49.9 <190 165 Chromatograp 	U unics (DRO) Qualifier U U U U Qualifier S1+ S1+	49.9 (GC) RL 49.9 49.9 49.9 49.9 <u>Limits</u> 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg		Prepared 02/02/24 09:58 02/02/24 09:58 02/02/24 09:58 Prepared 02/02/24 09:58	02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26 02/07/24 05:26 Analyzed 02/07/24 05:26	Dil Fac 1 1 1 1 <i>Dil Fac</i> 1
Total TPH Method: SW846 8015B NM - Die Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane Method: EPA 300.0 - Anions, Ior	 <49.9 sel Range Orga Result <49.9 <49.9 <49.9 <49.9 <49.9 <49.9 <190 165 Chromatograp 	U Qualifier U U U Qualifier S1+ S1+	49.9 (GC) RL 49.9 49.9 49.9 49.9 <u>Limits</u> 70 - 130 70 - 130	mg/Kg Unit mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/02/24 09:58 02/02/24 09:58 02/02/24 09:58 Prepared 02/02/24 09:58 02/02/24 09:58	02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26 02/07/24 05:26 Analyzed 02/07/24 05:26 02/07/24 05:26	1 Dil Fac 1 1 1 <i>Dil Fac</i> 1 1

Date Received: 01/30/24 15:46 Sample Depth: 1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198	mg/Kg		02/07/24 11:42	02/08/24 05:14	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/07/24 11:42	02/08/24 05:14	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/07/24 11:42	02/08/24 05:14	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/07/24 11:42	02/08/24 05:14	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/07/24 11:42	02/08/24 05:14	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/07/24 11:42	02/08/24 05:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	120		70 - 130			02/07/24 11:42	02/08/24 05:14	1
1,4-Difluorobenzene (Surr)	99		70 - 130			02/07/24 11:42	02/08/24 05:14	1

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex

Client Sample Results

Job ID: 890-6072-1

Analyse Result Qualifier RL Unit D Prepared Analysed DIF 5 Total BTEX <0.00396 U 0.00396 Mithod: SW846 8015 MJ Oliceal Range Organics (DRO) (GC) Analyse Result Qualifier RL Unit D Prepared Analysed DIF 5 Total TFH <48.6 U 48.6 mg/Kg D Prepared Analysed DIF 5 Method: SW846 8015 MJ Diesel Range Organics (DRO) CCC Analysed DIF 6 CCCC224 05:86 CCCC724 05:47 DIF 6 Gaucine Range Organics (Over C28-C36) <49.6 U 49.6 mg/Kg CCCC224 05:86 CCC724 05:47 CCCC224 05:86 CCCC724 05:47 CCCC224 05:86 CCCC724	ate Collected: 01/26/24 12:10 ate Received: 01/30/24 15:46 ample Depth: 1	: 890-6072-2 Matrix: Solid
Total BTEX <0.00396	Method: TAL SOP Total BTEX - Total BTEX Calculation	
Mathod: SW846 8015 NM - Diesel Rango Organics (DRO) (GC) Analyte Result Qualifier RL 49.6 Unit D Prepared QU07/24 05:47 Analyzed QU07/24 05:47 DI Fa Total TPH 49.6 U 49.6 mg/kg D Prepared QU07/24 05:47 DI Fa Mathod: SW846 8015B NM - Diesel Rango Organics (DRO) 49.6 mg/kg D 2020224 09:58 02007/24 05:47 DI Fa Gasoline Range Organics (Over C10-C28) 49.6 49.8 mg/kg 0200224 09:58 02007/24 05:47 DI Fa Surogate C10-C28) - 49.6 49.6 mg/kg 02007/24 05:47 DI Fa Surogate C10-C229 - 49.6 19.8 mg/kg 02007/24 05:47 DI Fa Surogate C10-C229 - 49.6 19.8 mg/kg 02007/24 05:47 DI Fa Surogate C10-C229 - 51.7 70.130 DI Fa 02007/24 05:47 DI Fa Method: EPA Result Qualifier RL Unit D Prepared Analyzed DI Fa		
Analyte Result Qualifier RL Unit D Prepared Analyzed DDI Fa Total TPH <48.6 U 48.6 U 48.6 020724 05.47 020724 05.47 Mathod: SW846 8015B NM - Diesel Range Organics (DRO) Result Qualifier RL Unit D Prepared Analyzed DDI Fa Gasoline Range Organics (Over <48.6 U 48.6 mgKg 020724 05.47 020724 05.47 020724 05.47 Oll Range Organics (Over <48.6 U 48.6 mgKg 020724 05.87 020724 05.47 020	Total BTEX <0.00396 U 0.00396 mg/Kg 02/08/24	05:14 1
Analyte Result Qualifier RL Unit D Prepared Analyzed DDI Fa Total TPH <40.6	Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC)	
Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC) Analyce Number of the second of the secon		zed Dil Fac
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Gasoline Range Organics (GNC) <49.6	Total TPH <49.6 U 49.6 mg/Kg 02/07/24	05:47 1
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Gasoline Range Organics (OVer -49.6 U 49.6 mg/Kg 02/02/24 09:58 02/07/24 09:57 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03 02/07/24 17:03	Method: SW846 8015B NM - Diesel Range Organics (DRO) (GC)	
Gasoline Range Organics (GRG) -49.6 U 49.6 mg/kg 02/02/24 09:58 02/07/24 05:47 Diese Range Organics (Over -49.6 U 49.6 mg/kg 02/02/24 09:58 02/07/24 05:47 Oll Range Organics (Over C28-C36) -49.6 U 49.6 mg/kg 02/02/24 09:58 02/07/24 05:47 Surrogate 'Kecovery Qualifier Limits mg/kg 02/02/24 09:58 02/07/24 05:47 - Tenhenyl 165 S1+ 70.130 02/02/24 09:58 02/07/24 06:47 - Chlorocatane 162 S1+ 70.130 02/02/24 09:58 02/07/24 06:47 Analyte Result Qualifier Limits D Prepared Analyzed Dil Fa Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Chloridie 1153 5.01 mg/kg 02/01/24 17.03 02/01/24 17.03 02/01/24 17.03 02/01/24 17.03 02/01/24 17.03 02/01/24 17.03 02/01/24 17.03 02/01/24 17.03 02/01/24 17.03		zed Dil Fac
Desci Range Organics (Over <49.6 U 49.6 mg/kg 02/02/24 09:58 02/07/24 05:47 C10-C28) Oll Range Organics (Over C28-C36) <49.6		
C10-C28) OII Range Organics (Over C28-C36) <49.6		
Oil Range Organics (Over C28-C36) <49.6 mg/kg 02/02/24 09:58 02/07/24 05:47 Surrogate %Recovery 0-Terphenyl Qualifier Limits Prepared Analyzed Dil Fa 0-Terphenyl 166 51+ 70.130 02/02/24 09:58 02/07/24 05:47 02/02/24 09:58 02/07/24 05:47 1-Chlorooctane 162 51+ 70.130 02/02/24 09:58 02/07/24 05:47 02/02/24 09:58 02/07/24 05:47 Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Choindie 153 5.01 mg/Kg 02/07/24 16:28 Lab Sample ID: 890-6072- Itient Sample ID: BH24-9 Lab Sample ID: 800-6072- Matrix: Solit Matrix: Solit Matrix: Solit ate Collected: 01/30/24 15:46 amalyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Benzene <0.00200		00.47
o-Terphenyl 186 S1+ 70.130 02/02/24 09:58 02/07/24 05:47 Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Prepared Analyzed DII Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed DII Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed DII Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed DII Fa Chloride 112:00 Lab Sample ID: 890-6072. Matrix: Solitivate Received: 01/24/24 15:46 Matrix: Solitivate Received: 01/30/24 15:46 Matrix: Solitivate Received: 01/30/24 17:03 02/07/24 17:13 DII Fa Method: SW846 8021B - Volatile Organic Compounds (GC) Matrix: Solitivate Received: 0.00200 0.00200 mg/Kg 02/01/24 17:03 02/07/24 17:13 Tollene <0.00200		05:47 1
o-Terphenyl 186 S1+ 70.130 02/02/24 09:58 02/07/24 05:47 Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Prepared Analyzed DII Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed DII Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed DII Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed DII Fa Atte Received: 01/24/24 12:00 tate Received: 01/24/24 15:46 Matrix: Solit Matrix: Solit ate Received: 01/20/24 15:46 Result Qualifier RL Mg/Kg Q2/01/24 17:03 Q2/07/24 17:13 Method: SW846 8021B - Volatile Organic Compounds (GC) Natyle Result Qualifier RL Unit D Prepared Analyzed DII Fa Gluene <0.00200	Surrogate %Recovery Qualifier Limits Prepared Analy	zed Dil Fac
1-Chlorooctane 162 S1+ 70-130 02/02/24 09:58 02/07/24 05:47 Method: EPA 300.0 - Anions, Ion Chromatography - Soluble Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed Dil Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed Dil Fa Chloride 153 5.01 mg/Kg D Prepared Analyzed Dil Fa Chloride 01/24/24 12:00 Analyzed Dil Fa Matrix: Solit Matrix: Solit Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Benzene <0.00200		
AnalyteResultQualifierRLUnitDPreparedAnalyzedDil FaChloride1535.01mg/KgDAnalyzedDil FaSilient Sample ID: BH24-9 ate Collected: 01/30/24 15:46 ample Depth: 0Lab Sample ID: 890-6072.4 Matrix: SolidMethod: SW846 8021B - Volatile Organic Compounds (GC) AnalyteResultQualifierRL output for the second of the second		05:47 1
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Chloride 153 5.01 mg/Kg 02/04/24 16:28 02/04/24 16:28 02/04/24 16:28 02/04/24 16:28 02/04/24 16:28 02/04/24 16:28 02/04/24 16:28 02/04/24 16:28 Matrix: Solid Chloride 01/30/24 15:46 Sample Depth: 0 Matrix: Solid Matrix: Solid Matrix: Solid Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Benzene <0.00200	Mothod: 5DA 300.0 - Anione Jon Chromatography - Soluble	
Chloride 153 5.01 mg/Kg 02/04/24 16:28 Chloride 153 5.01 mg/Kg 02/04/24 16:28 Chloride 101/24/24 12:00 Matrix: Solid Matrix: Solid State Collected: 01/24/24 15:46 Matrix: Solid Matrix: Solid ample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Matrix: Solid Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Benzene <0.00200		zed Dil Fac
Litent Sample ID: BH24-9 tate Collected: 01/24/24 12:00 Lab Sample ID: 890-6072-3 Matrix: Solid Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Benzene Source Result Qualifier RL Unit D Prepared Analyzed Dil Fa Benzene 0.00200 U 0.00200 mg/Kg 02/01/24 17:03 02/07/24 17:13 Dil Fa Toluene 0.00200 U 0.00200 mg/Kg 02/01/24 17:03 02/07/24 17:13 Dil Fa m-Xylene 0.00200 U 0.00200 mg/Kg 02/01/24 17:03 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:13 02/07/24 17:		
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Benzene <0.00200 U 0.00200 mg/Kg 02/01/24 17:03 02/07/24 17:13 02/07/24		Matrix: Solid
Benzene <0.00200	ate Received: 01/30/24 15:46 Sample Depth: 0	Matrix: Solid
Toluene <0.00200	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC)	
Ethylbenzene <0.00200 U 0.00200 mg/kg 02/01/24 17:03 02/07/24 17:13 m-Xylene & p-Xylene <0.00401	Analyte Received: 01/30/24 15:46 Sw846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analy	zed Dil Fac
m-Xylene & p-Xylene <0.00401 U 0.00401 mg/Kg 02/01/24 17:03 02/07/24 17:13 o-Xylene <0.00200	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1
o-Xylene <0.00200	Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1
Xylenes, Total <0.00401 U 0.00401 mg/Kg 02/01/24 17:03 02/07/24 17:13 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fa 4-Bromofluorobenzene (Surr) 97 70 - 130 70 - 130 02/01/24 17:03 02/07/24 17:13 Dil Fa 1,4-Difluorobenzene (Surr) 102 70 - 130 02/01/24 17:03 02/07/24 17:13 Dil Fa Method: TAL SOP Total BTEX - Total BTEX Calculation Result Qualifier RL Unit D Prepared Analyzed Dil Fa Total BTEX 0.00401 0.00401 mg/Kg D Prepared Analyzed Dil Fa Total BTEX 0.00401 0.00401 mg/Kg D Prepared Analyzed Dil Fa Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) 0 </td <td>Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200</td> U 0.00200 mg/Kg 02/01/24 17:03 02/07/24 Toluene <0.00200	Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1
Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fa 4-Bromofiluorobenzene (Surr) 97 70 - 130 02/01/24 17:03 02/07/24 17:13 02/07/24 17:13 1,4-Difluorobenzene (Surr) 102 70 - 130 02/01/24 17:03 02/07/24 17:13 02/07/24 17:13 Method: TAL SOP Total BTEX - Total BTEX Calculation Result Qualifier RL Unit D Prepared Analyzed Dil Fa Total BTEX <0.00401	Pate Received: 01/30/24 15:46 Method: SW846 8021B - Volatile Organic Computed (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
4-Bromofluorobenzene (Surr) 97 70 - 130 02/01/24 17:03 02/07/24 17:13 1,4-Difluorobenzene (Surr) 102 70 - 130 02/01/24 17:03 02/07/24 17:13 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Total BTEX <0.00401	Date Received: 01/30/24 15:46 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
1,4-Difluorobenzene (Surr) 102 70 - 130 02/01/24 17:03 02/07/24 17:13 Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Total BTEX <0.00401	Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
Method: TAL SOP Total BTEX - Total BTEX Calculation Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Total BTEX <0.00401	Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 zed Dil Fac
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Total BTEX <0.00401	Mathe Received: 01/30/24 15:46 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyt Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 zed Dil Fac
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa Total BTEX <0.00401	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
Total BTEX <0.00401 0.00401 mg/Kg 02/07/24 17:13 Method: SW846 8015 NM - Diesel Range Organics (DRO) (GC) Image: Contract of the second se	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyt Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyt Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 zed Dil Fac 17:13 1 zed Dil Fac J7:13 1
Total TPH <50.3 U 50.3 mg/Kg 02/07/24 06:07	Date Received: 01/30/24 15:46 Sample Depth: 0 Method: SW846 8021B - Volatile Organic Compounds (GC) Analyte Result Qualifier RL Unit D Prepared Analyte Benzene <0.00200	zed Dil Fac 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1 17:13 1
Analyte Result Qualifier RL Unit D Prepared Analyzed Dil Fa	Survey and even of the second of the	zed Dil Fau 17:13 17:13 17:13 17:13 17:13 17:13 17:13 17:13 17:13 17:13 17:13 Dil Fau

Eurofins Carlsbad

02/07/24 06:07

Gasoline Range Organics (GRO)

50.3

mg/Kg

02/02/24 09:58

<50.3 U

Client: Vertex

Job ID: 890-6072-1

lient Sample ID: BH24-9						Lab Sar	nple ID: 890-	6072-3
ate Collected: 01/24/24 12:00								x: Solid
ate Received: 01/30/24 15:46								
ample Depth: 0								
Method: SW846 8015B NM - Dies	el Range Orga	nics (DRO) ((GC) (Continued)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Diesel Range Organics (Over C10-C28)	<50.3	U	50.3	mg/Kg		02/02/24 09:58	02/07/24 06:07	
Oll Range Organics (Over C28-C36)	<50.3	U	50.3	mg/Kg		02/02/24 09:58	02/07/24 06:07	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
p-Terphenyl		S1+	70 - 130			02/02/24 09:58	02/07/24 06:07	
-Chlorooctane	158	S1+	70 - 130			02/02/24 09:58	02/07/24 06:07	
Method: EPA 300.0 - Anions, Ion	Chromatogram	hy - Soluble						
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	537		24.8	mg/Kg		·	02/04/24 16:33	
ient Sample ID: BH24-11						Lab San	nple ID: 890-	
te Collected: 01/24/24 12:40							Matri	x: Soli
ate Received: 01/30/24 15:46								
imple Depth: 0								
Nethod: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
nalyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
enzene	< 0.00199	U	0.00199	mg/Kg		02/01/24 17:03	02/07/24 17:39	
bluene	<0.00199	U	0.00199	mg/Kg		02/01/24 17:03	02/07/24 17:39	
thylbenzene	<0.00199	U	0.00199	mg/Kg		02/01/24 17:03	02/07/24 17:39	
-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/01/24 17:03	02/07/24 17:39	
-Xylene	<0.00199	U	0.00199	mg/Kg		02/01/24 17:03	02/07/24 17:39	
ylenes, Total	<0.00398	U	0.00398	mg/Kg		02/01/24 17:03	02/07/24 17:39	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
-Bromofluorobenzene (Surr)			70 - 130			02/01/24 17:03	02/07/24 17:39	
,4-Difluorobenzene (Surr)	111		70 - 130			02/01/24 17:03	02/07/24 17:39	
Method: TAL SOP Total BTEX - To				11-14		Durante	A	D!! F.
otal BTEX		Qualifier	RL	Unit mg/Kg	D	Prepared	Analyzed 02/07/24 17:39	Dil Fa
	<0.00390	0	0.00398	ilig/Rg			02/07/24 17:39	
lethod: SW846 8015 NM - Diesel	l Range Organ	ics (DRO) (G	SC)					
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
otal TPH	<50.5	U	50.5	mg/Kg			02/07/24 06:28	
Aethod: SW846 8015B NM - Dies	el Range Orga	nics (DRO) ((GC)					
nalyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
asoline Range Organics (GRO)	<50.5		50.5	mg/Kg		02/02/24 09:58	02/07/24 06:28	
	<50.5		50.5	mg/Kg		02/02/24 09:58	02/07/24 06:28	
				0.0				
iesel Range Organics (Over			50.5	mg/Kg		02/02/24 09:58	02/07/24 06:28	
iesel Range Organics (Over :10-C28)	<50.5	U	50.5	00				
iesel Range Organics (Over :10-C28) II Range Organics (Over C28-C36)						Prepared	Analyzod	Dil Er
biesel Range Organics (Over 10-C28) Ill Range Organics (Over C28-C36) Currogate -Terphenyl	%Recovery		Limits 70 - 130			Prepared 02/02/24 09:58	Analyzed 02/07/24 06:28	Dil Fa

Client Sample Results

ent: Vertex							Job ID: 890	-6072-1			
roject/Site: JRU DI 1A CTB 23E-04	616										
lient Sample ID: BH24-11						l ab Sar	nple ID: 890-	6072-4			
ate Collected: 01/24/24 12:40						Eury Cu.	Lab Sample ID: 890-6072-4 Matrix: Solid				
ate Received: 01/30/24 15:46							116	A. 00114			
Sample Depth: 0											
Method: EPA 300.0 - Anions, Ion											
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Chloride	712		50.0	mg/Kg			02/04/24 16:38	10			
Client Sample ID: BH24-12						Lab San	nple ID: 890-	6072-5			
Date Collected: 01/24/24 13:00							Matri	ix: Solid			
Date Received: 01/30/24 15:46											
Sample Depth: 0											
Method: SW846 8021B - Volatile 0	Organic Comp	ounde (GC)									
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Benzene	<0.00199		0.00199	mg/Kg		02/01/24 17:03	02/07/24 18:05	1			
Toluene	< 0.00199		0.00199	mg/Kg		02/01/24 17:03	02/07/24 18:05	1			
Ethylbenzene	<0.00199		0.00199	mg/Kg		02/01/24 17:03	02/07/24 18:05	1			
m-Xylene & p-Xylene	<0.00398		0.00398	mg/Kg		02/01/24 17:03	02/07/24 18:05	1			
o-Xylene	<0.00199		0.00199	mg/Kg		02/01/24 17:03	02/07/24 18:05	1			
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/01/24 17:03	02/07/24 18:05	1			
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene (Surr)	103		70 - 130			02/01/24 17:03	02/07/24 18:05	1			
1,4-Difluorobenzene (Surr)	84		70 - 130			02/01/24 17:03	02/07/24 18:05	1			
- Method: TAL SOP Total BTEX - To	otal BTEX Calc	culation									
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Total BTEX	<0.00398		0.00398	mg/Kg		··	02/07/24 18:05	1			
-											
Method: SW846 8015 NM - Diesel											
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Total TPH	<49.6	U	49.6	mg/Kg			02/07/24 06:48	1			
- Method: SW846 8015B NM - Dies	el Range Orga	inics (DRO) ((30)								
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac			
Gasoline Range Organics (GRO)	<49.6		49.6	mg/Kg		02/02/24 09:58	02/07/24 06:48	1			
Diesel Range Organics (Over	<49.6		49.6	mg/Kg		02/02/24 09:58	02/07/24 06:48	1			
C10-C28)											
Oll Range Organics (Over C28-C36)	<49.6	U	49.6	mg/Kg		02/02/24 09:58	02/07/24 06:48	1			
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac			
o-Terphenyl		<u></u>	70 - 130			02/02/24 09:58	02/07/24 06:48	1			
		S1+	70 - 130			02/02/24 09:58	02/07/24 06:48	1			
1-Chlorooctane	139										
1-Chlorooctane											
1-Chlorooctane Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Soluble									
1-Chlorooctane	Chromatograp		RL	Unit mg/Kg	<u>D</u>	Prepared	Analyzed 02/04/24 16:43	Dil Fac			

Job ID: 890-6072-1

Prep Type: Total/NA

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616

Method: 8021B - Volatile Organic Compounds (GC) Matrix: Solid

			/	Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)		
880-38450-A-1-E MS	Matrix Spike	124	84	·	-
880-38450-A-1-F MSD		124 166 S1+	04 110		
	Matrix Spike Duplicate				
890-6046-A-1-I MS	Matrix Spike	108	98		
890-6046-A-1-J MSD	Matrix Spike Duplicate	119	68 S1-		
890-6072-1	BH24-16	121	86		- 5
890-6072-2	BH24-16	120	99		
890-6072-3	BH24-9	97	102		
890-6072-4	BH24-11	117	111		
890-6072-5	BH24-12	103	84		
LCS 880-72184/1-A	Lab Control Sample	113	68 S1-		
LCS 880-72364/1-A	Lab Control Sample	128	90		
LCSD 880-72184/2-A	Lab Control Sample Dup	100	83		
LCSD 880-72364/2-A	Lab Control Sample Dup	134 S1+	79		
MB 880-72184/5-A	Method Blank	80	111		
MB 880-72185/5-A	Method Blank	63 S1-	81		
MB 880-72364/5-A	Method Blank	67 S1-	100		- i
Surrogate Legend					
BFB = 4-Bromofluorobe	nzene (Surr)				
DFBZ = 1,4-Difluoroben	zene (Surr)				

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

Matrix: Solid

Prep Type: Total/NA

				Percent Surrogate Recovery
		OTPH1	1CO1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
880-38742-A-61-N MS	Matrix Spike	159 S1+	145 S1+	
880-38742-A-61-O MSD	Matrix Spike Duplicate	159 S1+	148 S1+	
890-6072-1	BH24-16	190 S1+	165 S1+	
890-6072-2	BH24-16	186 S1+	162 S1+	
890-6072-3	BH24-9	181 S1+	158 S1+	
890-6072-4	BH24-11	173 S1+	150 S1+	
890-6072-5	BH24-12	159 S1+	139 S1+	
LCS 870-17917/1-A	Lab Control Sample	124	123	
LCSD 870-17917/2-A	Lab Control Sample Dup	122	120	
MB 870-17917/3-A	Method Blank	136 S1+	129	

Surrogate Legend

OTPH = o-Terphenyl

1CO = 1-Chlorooctane

Lab Sample ID: MB 880-72184/5-A

Matrix: Solid

Analyte

Benzene

Toluene

o-Xylene

Ethylbenzene

Xylenes, Total

m-Xylene & p-Xylene

Analysis Batch: 72459

MB MB

<0.00200 U

<0.00200 U

<0.00200 U

<0.00400 U

<0.00200 U

<0.00400 U

Result Qualifier

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Unit D Prepared Analyzed mg/Kg 02/01/24 17:03 02/07/24 09:18 mg/Kg 02/01/24 17:03 02/07/24 09:18 02/01/24 17:03 02/07/24 09:18 mg/Kg mg/Kg 02/01/24 17:03 02/07/24 09:18 1 mg/Kg 02/01/24 17:03 02/07/24 09:18 1 02/01/24 17:03 02/07/24 09:18 mg/Kg

Client Sample ID: Lab Control Sample

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 72184

Prep Type: Total/NA

	МВ	МВ				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		70 - 130	02/01/24 17:03	02/07/24 09:18	1
1,4-Difluorobenzene (Surr)	111		70 - 130	02/01/24 17:03	02/07/24 09:18	1

RL

0.00200

0.00200

0.00200

0.00400

0.00200

0.00400

Lab Sample ID: LCS 880-72184/1-A Matrix: Solid

Analysis Batch: 72459

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.08781		mg/Kg		88	70 - 130	
Toluene	0.100	0.08899		mg/Kg		89	70 - 130	
Ethylbenzene	0.100	0.08006		mg/Kg		80	70 - 130	
m-Xylene & p-Xylene	0.200	0.2102		mg/Kg		105	70 - 130	
o-Xylene	0.100	0.1097		mg/Kg		110	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130

Lab Sample ID: LCSD 880-72184/2-A

Matrix: Solid

Analysis Batch: 72459	atch: 72459						Prep	Batch:	72184
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.08092		mg/Kg		81	70 - 130	8	35
Toluene	0.100	0.08932		mg/Kg		89	70 - 130	0	35
Ethylbenzene	0.100	0.09202		mg/Kg		92	70 - 130	14	35
m-Xylene & p-Xylene	0.200	0.2104		mg/Kg		105	70 - 130	0	35
o-Xylene	0.100	0.09483		mg/Kg		95	70 - 130	15	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	83		70 - 130

Lab Sample ID: 880-38450-A-1-E MS

Matrix: Solid

Analysis Batch: 72459									Pre	p Batch: 72184
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U	0.0996	0.07462		mg/Kg		75	70 - 130	
Toluene	<0.00200	U	0.0996	0.08512		mg/Kg		84	70 - 130	

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Prep Type: Total/NA

Client Sample ID: Matrix Spike

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616

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

Lab Sample ID: 880-38450-4 Matrix: Solid	A-1-E MS							Client	Sample ID Prep 1	: Matrix Type: To	
Analysis Batch: 72459										Batch:	
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Ethylbenzene	<0.00200	U	0.0996	0.08234		mg/Kg		83	70 - 130		
m-Xylene & p-Xylene	<0.00401	U F1	0.199	0.1872		mg/Kg		94	70 - 130		
o-Xylene	<0.00200	U	0.0996	0.08993		mg/Kg		90	70 - 130		
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	124		70 - 130								
1,4-Difluorobenzene (Surr)	84		70 - 130								
- Lab Sample ID: 880-38450-/	A-1-F MSD					CI	ient Sa	ample IC): Matrix S	oike Dur	olicate
Matrix: Solid										Гуре: То	
Analysis Batch: 72459										Batch:	
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U	0.0990	0.1013		mg/Kg		102	70 - 130	30	35
Toluene	<0.00200	U	0.0990	0.1158		mg/Kg		116	70 - 130	31	35
Ethylbenzene	<0.00200	U	0.0990	0.1055		mg/Kg		107	70 - 130	25	35
m-Xylene & p-Xylene	<0.00401	U F1	0.198	0.2670	F1	mg/Kg		135	70 - 130	35	35

0.0990

0.1182

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	166	S1+	70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

<0.00200 U

Lab Sample ID: MB 880-72185/5-A Matrix: Solid Analysis Batch: 72459

o-Xylene

	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/01/24 17:08	02/06/24 19:40	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/01/24 17:08	02/06/24 19:40	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/01/24 17:08	02/06/24 19:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/01/24 17:08	02/06/24 19:40	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/01/24 17:08	02/06/24 19:40	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/01/24 17:08	02/06/24 19:40	1
	MB	МВ						
	MD							
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

70 - 130

70 - 130

1,4-Difluorobenzene (Surr)	81
- Lab Sample ID: MB 880-72364/5-A	

Matrix: Solid Analysis Batch: 72580

4-Bromofluorobenzene (Surr)

Analysis Batch: 72580							Prep Batc
	MB	МВ					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed
Benzene	<0.00200	U	0.00200	mg/Kg		02/05/24 11:42	02/07/24 22:47
Toluene	<0.00200	U	0.00200	mg/Kg		02/05/24 11:42	02/07/24 22:47
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/05/24 11:42	02/07/24 22:47
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/05/24 11:42	02/07/24 22:47

63 S1-

Job ID: 890-6072-1

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 72185

70 - 130

27

35

1

1

Dil Fac

1

1

1

1

119

02/01/24 17:08

02/01/24 17:08

mg/Kg

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 72364

02/06/24 19:40

02/06/24 19:40

2/12/2024

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

Lab Sample ID: MB 880-72364/5-A										Client Sa	mple ID: Metho	od Blank	
Matrix: Solid											Prep Type:		
Analysis Batch: 72580											Prep Batcl		2
-	МВ	MB											
Analyte	Result	Qualifier	RL		ι	Jnit		D	Р	repared	Analyzed	Dil Fac	5
o-Xylene	<0.00200	U	0.00200		n	ng/Kg			02/0	5/24 11:42	02/07/24 22:47	1	
Xylenes, Total	<0.00400	U	0.00400		n	ng/Kg			02/0	5/24 11:42	02/07/24 22:47	1	1
	MB	МВ											
Surrogate	%Recovery	Qualifier	Limits						Р	repared	Analyzed	Dil Fac	ŝ
4-Bromofluorobenzene (Surr)	67	S1-	70 - 130	-					02/0	5/24 11:42	02/07/24 22:47	1	
1,4-Difluorobenzene (Surr)	100		70 - 130						02/0	5/24 11:42	02/07/24 22:47	1	
Lab Sample ID: LCS 880-72364/1-/	4							C	lient	Sample I	ID: Lab Control	Sample	1
Matrix: Solid											Prep Type:		
Analysis Batch: 72580											Prep Batc	h: 72364	
			Spike		LCS						%Rec		
Analyte			Added		Qualifi		Unit		D	%Rec	Limits		
Benzene			0.100	0.1047			mg/Kg			105	70 - 130		
Toluene			0.100	0.09944		I	mg/Kg			99	70 - 130		
Ethylbenzene			0.100	0.1187			mg/Kg			119	70 - 130		1
m-Xylene & p-Xylene			0.200	0.2555			mg/Kg			128	70 - 130		
o-Xylene			0.100	0.1240			mg/Kg			124	70 - 130		i
	LCS LCS	;											
Surrogate %	<pre>%Recovery Qua</pre>	lifier	Limits										
4-Bromofluorobenzene (Surr)	128		70 - 130										
1,4-Difluorobenzene (Surr)	90		70 - 130										
							.		_				
Lab Sample ID: LCSD 880-72364/2	:- A						CI	ient	Sam	iple ID: La	ab Control Sam		
Matrix: Solid											Prep Type:		
Analysis Batch: 72580											Prep Batc		
			Spike	LCSD	LCSD						%Rec	RPD	

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09592		mg/Kg		96	70 - 130	9	35
Toluene	0.100	0.08954		mg/Kg		90	70 - 130	10	35
Ethylbenzene	0.100	0.1145		mg/Kg		114	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2583		mg/Kg		129	70 - 130	1	35
o-Xylene	0.100	0.1220		mg/Kg		122	70 - 130	2	35

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	134	S1+	70 - 130
1,4-Difluorobenzene (Surr)	79		70 - 130

Lab Sample ID: 890-6046-A-1-I MS Matrix: Solid

Analysis Batch: 72580									Prep	Batch: 72364
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	<0.00200	U F2 F1	0.0996	0.05143	F1	mg/Kg		52	70 - 130	
Toluene	<0.00200	U F2 F1	0.0996	0.04714	F1	mg/Kg		47	70 - 130	
Ethylbenzene	<0.00200	U	0.0996	0.07346		mg/Kg		74	70 - 130	
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.1050	F1	mg/Kg		53	70 - 130	
o-Xylene	<0.00200	U	0.0996	0.08578		mg/Kg		86	70 - 130	

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Client Sample ID: Matrix Spike

Prep Type: Total/NA

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

Lab Sample ID: 890-6046-A-1-I MS

Matrix: Solid Analysis Batch: 72580

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	98		70 _ 130

Lab Sample ID: 890-6046-A-1-J MSD Matrix: Solid

Analysis Batch: 72580

Analysis Batch: 72580									Prep	Batch:	72364
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F2 F1	0.0994	0.07897	F2	mg/Kg		79	70 - 130	42	35
Toluene	<0.00200	U F2 F1	0.0994	0.07673	F2	mg/Kg		77	70 - 130	48	35
Ethylbenzene	<0.00200	U	0.0994	0.07462		mg/Kg		75	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U F2 F1	0.199	0.1823	F2	mg/Kg		92	70 - 130	54	35
o-Xylene	<0.00200	U	0.0994	0.09084		mg/Kg		91	70 - 130	6	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	119		70 - 130								
1,4-Difluorobenzene (Surr)	68	S1-	70 - 130								

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

	Client Sa	mple ID: Method Blan
		Prep Type: Total/N
		Prep Batch: 1791
MB MB		
Result Qualifier RL Unit	D Prepared	Analyzed Dil Fa
<50.0 U 50.0 mg/Kg	02/02/24 09:58	02/06/24 22:55
<50.0 U 50.0 mg/Kg	02/02/24 09:58	02/06/24 22:55
<50.0 U 50.0 mg/Kg	02/02/24 09:58	02/06/24 22:55
MB MB		
%Recovery Qualifier Limits	Prepared	Analyzed Dil Fa
136 S1+ 70 - 130	02/02/24 09:58	02/06/24 22:55
129 70 - 130	02/02/24 09:58	02/06/24 22:55
	Client Sample	ID: Lab Control Sampl
		Prep Type: Total/N
		Prep Batch: 1791
Spike LCS LCS		%Rec
Added Result Qualifier	Unit D %Rec	Limits
1020 1010		70 - 130
1010 1182	mg/Kg 117	70 - 130

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	124		70 - 130
1-Chlorooctane	123		70 - 130

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Prep Batch: 72364

Prep Type: Total/NA

Client Sample ID: Matrix Spike Duplicate

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616

Lab Sample ID: LCSD 870-17917/2-A

Matrix: Solid

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

Watrix: Solid									_		
Analysis Batch: 17989			• •						-	p Batch:	
			Spike		LCSD		_	~~ -	%Rec		RPD
Analyte			Added		Qualifier	Unit			Limits	RPD	Limit
Gasoline Range Organics (GRO)			1020	1003		mg/Kg		98		1	20
Diesel Range Organics (Over C10-C28)			1010	1132		mg/Kg		112	70 - 130	4	20
0	LCSD		1 : : 4 -								
Surrogate	%Recovery 122	Qualifier	Limits 70 - 130								
o-Terphenyl 1-Chlorooctane	122		70 - 130 70 - 130								
-	120		10-100								
Lab Sample ID: 880-38742-A-6 Matrix: Solid	51-N MS							Clier	nt Sample ID	D: Matrix Type: To	
Analysis Batch: 17989										p Batch:	
Analysis Batch. 17505	Sample	Sample	Spike	MS	MS				%Rec	J Datch.	1/91/
Analyte		Qualifier	Added		Qualifier	Unit	D	%Rec			
Gasoline Range Organics (GRO)	<49.6		1020	1232		mg/Kg		120	70 - 130		
Diesel Range Organics (Over	<49.6		1020	1372	F1	mg/Kg		135			
C10-C28)											
	MS	MS									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl		<u>S1+</u>	70 - 130								
1-Chlorooctane	145	S1+	70 - 130								
Lab Sample ID: 880-38742-A-6 Matrix: Solid	61-O MSD					(Client	Sample	ID: Matrix S Prep	pike Dup Type: To	
-	51-O MSD Sample	Sample	Spike	MSD	MSD	(Client	Sample	Prep		tal/NA
Matrix: Solid	Sample	Sample Qualifier	Spike Added		MSD Qualifier	Unit	Client :	-	Prep Prep	Type: To	tal/NA 17917
Matrix: Solid Analysis Batch: 17989	Sample Result	•	-		Qualifier			-	Prep Prep %Rec	Type: To p Batch:	tal/NA 17917 RPD
Matrix: Solid Analysis Batch: 17989 Analyte	Sample Result	Qualifier U F1	Added	Result	Qualifier F1	Unit		%Rec	Prep Prep %Rec Limits 70 - 130	Type: To p Batch: 	tal/NA 17917 RPD Limit
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over	Sample Result <49.6	Qualifier U F1 U F1	Added 1020	Result 1382	Qualifier F1	- Unit mg/Kg		% Rec	Prep Prep %Rec Limits 70 - 130	Type: Top p Batch: RPD 11	tal/NA 17917 RPD Limit 20
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over	Sample Result <49.6 <49.6	Qualifier U F1 U F1	Added 1020	Result 1382	Qualifier F1	- Unit mg/Kg		% Rec	Prep Prep %Rec Limits 70 - 130	Type: Top p Batch: RPD 11	tal/NA 17917 RPD Limit 20
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl	Sample Result <49.6 <49.6 MSD %Recovery 159	Qualifier U F1 U F1 U F1 MSD Qualifier S1+	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382	Qualifier F1	- Unit mg/Kg		% Rec	Prep Prep %Rec Limits 70 - 130	Type: Top p Batch: RPD 11	tal/NA 17917 RPD Limit 20
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate	Sample Result <49.6 <49.6 MSD %Recovery	Qualifier U F1 U F1 U F1 MSD Qualifier S1+	Added 1020 1020 Limits	Result 1382	Qualifier F1	- Unit mg/Kg		% Rec	Prep Prep %Rec Limits 70 - 130	Type: Top p Batch: RPD 11	tal/NA 17917 RPD Limit 20
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382	Qualifier F1	- Unit mg/Kg		% Rec	Prep Prep %Rec Limits 70 - 130	Type: Top p Batch: RPD 11	tal/NA 17917 RPD Limit 20
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane	Sample Result <49.6 <49.6 <i>MSD</i> <i>%Recovery</i> 159 148 on Chromate	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382	Qualifier F1	- Unit mg/Kg		%Rec 135 136	Prep Prep %Rec Limits 70 - 130	Type: To p Batch: 	tal/NA 17917 RPD Limit 20 20
Matrix: Solid Analysis Batch: 17989 Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io	Sample Result <49.6 <49.6 <i>MSD</i> <i>%Recovery</i> 159 148 on Chromate	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382	Qualifier F1	- Unit mg/Kg		%Rec 135 136	Prep %Rec Limits 70 - 130 70 - 130 50 - 130	Type: To p Batch: 	tal/NA 17917 RPD Limit 20 20 20 Blank
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io	Sample Result <49.6 <49.6 <i>MSD</i> <i>%Recovery</i> 159 148 on Chromate	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382	Qualifier F1	- Unit mg/Kg		%Rec 135 136	Prep %Rec Limits 70 - 130 70 - 130 50 - 130	Type: To p Batch:	tal/NA 17917 RPD Limit 20 20 20 Blank
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid	Sample Result <49.6 <49.6 <i>MSD</i> <i>%Recovery</i> 159 148 on Chromate	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382	Qualifier F1	- Unit mg/Kg		%Rec 135 136	Prep %Rec Limits 70 - 130 70 - 130 50 - 130	Type: To p Batch:	tal/NA 17917 RPD Limit 20 20 20 Blank
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148 on Chromato	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+ Ography	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382 1384	Qualifier F1	- Unit mg/Kg		%Rec 135 136	Prep Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep	Type: To p Batch: <u>RPD</u> 11 1 1 Method	tal/NA 17917 RPD Limit 20 20 20 Blank
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid Analysis Batch: 72285	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148 on Chromate	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+ S1+ Ography MB MB	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382 1384	Qualifier F1 F1	Unit mg/Kg mg/Kg	<u>P</u>	%Rec 135 136	Prep Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep	Type: To p Batch:	tal/NA 17917 RPD Limit 20 20 20 Blank oluble
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid Analysis Batch: 72285 Analyte	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148 on Chromate %/1-A	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+ Ography MB MB essult Qualifier	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382 1384	Qualifier F1 F1	Unit mg/Kg mg/Kg	D	[%] Rec 135 136 Client Prepared	Prep Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep Analy:	Type: To p Batch: <u>RPD</u> 11 1 1 Method Type: So <u>rzed</u> 15:59	tal/NA 17917 RPD Limit 20 20 20 Blank oluble
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid Analysis Batch: 72285 Analyte Chloride	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148 on Chromate %/1-A	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+ Ography MB MB essult Qualifier	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382 1384	Qualifier F1 F1	Unit mg/Kg mg/Kg	D	[%] Rec 135 136 Client Prepared	Prep %Rec Limits 70 - 130 70 - 100 70 - 100 - 100 70 - 100 70 - 100 70 - 100 70 - 100 70 - 10	Type: To p Batch: <u>RPD</u> 11 1 1 Method Type: So <u>rzed</u> 15:59	tal/NA 17917 RPD Limit 20 20 20 Blank oluble Dil Fac 1 ample
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid Analysis Batch: 72285 Analyte Chloride Lab Sample ID: LCS 880-7201	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148 on Chromate %/1-A	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+ Ography MB MB essult Qualifier	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382 1384	Qualifier F1 F1	Unit mg/Kg mg/Kg	D	[%] Rec 135 136 Client Prepared	Prep %Rec Limits 70 - 130 70 - 100 70 - 100 - 100 70 - 100 70 - 100 70 - 100 70 - 100 70 - 10	Type: To p Batch: <u>RPD</u> 11 1 1 Method Type: So <u>rzed</u> 15:59 Control Sa	tal/NA 17917 RPD Limit 20 20 20 Blank oluble Dil Fac 1 ample
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid Analysis Batch: 72285 Analyte Chloride Lab Sample ID: LCS 880-7201 Matrix: Solid	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148 on Chromate %/1-A	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+ Ography MB MB essult Qualifier	Added 1020 1020 <i>Limits</i> 70 - 130	Result 1382 1384	Qualifier F1 F1	Unit mg/Kg mg/Kg	D	[%] Rec 135 136 Client Prepared	Prep %Rec Limits 70 - 130 70 - 100 70 - 100 - 100 70 - 100 70 - 100 70 - 100 70 - 100 70 - 10	Type: To p Batch: <u>RPD</u> 11 1 1 Method Type: So <u>rzed</u> 15:59 Control Sa	tal/NA 17917 RPD Limit 20 20 20 Blank oluble Dil Fac 1 ample
Matrix: Solid Analysis Batch: 17989 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Method: 300.0 - Anions, Io Lab Sample ID: MB 880-72013 Matrix: Solid Analysis Batch: 72285 Analyte Chloride Lab Sample ID: LCS 880-7201 Matrix: Solid	Sample Result <49.6 <49.6 <i>MSD</i> %Recovery 159 148 on Chromate %/1-A	Qualifier U F1 U F1 U F1 MSD Qualifier S1+ S1+ Ography MB MB essult Qualifier	Added 1020 1020 <i>Limits</i> 70 - 130 70 - 130	Result 1382 1384 5.00	Qualifier F1 F1 Unit	Unit mg/Kg mg/Kg	D	Client Prepared	Prep %Rec Limits 70 - 130 70 - 130	Type: To p Batch: <u>RPD</u> 11 1 1 Method Type: So <u>rzed</u> 15:59 Control Sa	tal/NA 17917 RPD Limit 20 20 20 Blank oluble Dil Fac 1 ample

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Job ID: 890-6072-1
2
3
Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
4

Released to Imaging: 5/10/2024 11:00:40 AM

QC Sample Results

Job ID: 890-6072-1

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616

Method: 300.0 - Anions, Ion Chromatography

_ Lab Sample ID: LCSD 880-72013/3	- A					Clie	nt Sam	ple ID:	Lab Contro	ol Sampl	e Dup
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72285											
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride			250	247.6		mg/Kg		99	90 - 110	0	20
- Lab Sample ID: 890-6072-1 MS								CI	ient Samp	le ID: BH	124-16
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72285											
	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride	141		250	402.4		mg/Kg		105	90 _ 110		
Lab Sample ID: 890-6072-1 MSD								CI	ient Samp	le ID: BH	124-16
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72285											
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride	141		250	400.6		mg/Kg		104	90 - 110	0	20

QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616

5 6

Job ID: 890-6072-1

GC VOA

Prep	Batch:	72184
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Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6072-3	BH24-9	Total/NA	Solid	5035	
890-6072-4	BH24-11	Total/NA	Solid	5035	
890-6072-5	BH24-12	Total/NA	Solid	5035	
MB 880-72184/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-72184/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-72184/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-38450-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-38450-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
rep Batch: 72185					
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-72185/5-A	Method Blank	Total/NA	Solid	5035	

880-38450-A-1-E MS	Matrix Spike	Iotal/NA	Solid	5035		
880-38450-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		8
Prep Batch: 72185						0
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	9
MB 880-72185/5-A	Method Blank	Total/NA	Solid	5035		
WID 000-72105/5-A		Total/INA	Solid	5035		
Prep Batch: 72364						
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch	
890-6072-1	BH24-16	Total/NA	Solid	5035		
890-6072-2	BH24-16	Total/NA	Solid	5035		
MB 880-72364/5-A	Method Blank	Total/NA	Solid	5035		4.9
LCS 880-72364/1-A	Lab Control Sample	Total/NA	Solid	5035		13
LCSD 880-72364/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-6046-A-1-I MS	Matrix Spike	Total/NA	Solid	5035		
890-6046-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		

Analysis Batch: 72459

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6072-3	BH24-9	Total/NA	Solid	8021B	72184
890-6072-4	BH24-11	Total/NA	Solid	8021B	72184
890-6072-5	BH24-12	Total/NA	Solid	8021B	72184
MB 880-72184/5-A	Method Blank	Total/NA	Solid	8021B	72184
MB 880-72185/5-A	Method Blank	Total/NA	Solid	8021B	72185
LCS 880-72184/1-A	Lab Control Sample	Total/NA	Solid	8021B	72184
LCSD 880-72184/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72184
880-38450-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	72184
880-38450-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72184

Analysis Batch: 72580

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6072-1	BH24-16	Total/NA	Solid	8021B	72364
890-6072-2	BH24-16	Total/NA	Solid	8021B	72364
MB 880-72364/5-A	Method Blank	Total/NA	Solid	8021B	72364
LCS 880-72364/1-A	Lab Control Sample	Total/NA	Solid	8021B	72364
LCSD 880-72364/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72364
890-6046-A-1-I MS	Matrix Spike	Total/NA	Solid	8021B	72364
890-6046-A-1-J MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72364

Analysis Batch: 72686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6072-1	BH24-16	Total/NA	Solid	Total BTEX	
890-6072-2	BH24-16	Total/NA	Solid	Total BTEX	
890-6072-3	BH24-9	Total/NA	Solid	Total BTEX	
890-6072-4	BH24-11	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616 Job ID: 890-6072-1

GC VOA (Continued)

Analysis Batch: 72686 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6072-5	BH24-12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6072-1	BH24-16	Total/NA	Solid	8015NM Prep	
890-6072-2	BH24-16	Total/NA	Solid	8015NM Prep	
890-6072-3	BH24-9	Total/NA	Solid	8015NM Prep	
890-6072-4	BH24-11	Total/NA	Solid	8015NM Prep	
890-6072-5	BH24-12	Total/NA	Solid	8015NM Prep	
MB 870-17917/3-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 870-17917/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17917/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-38742-A-61-N MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-38742-A-61-O MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6072-1	BH24-16	Total/NA	Solid	8015B NM	17917
890-6072-2	BH24-16	Total/NA	Solid	8015B NM	17917
890-6072-3	BH24-9	Total/NA	Solid	8015B NM	17917
890-6072-4	BH24-11	Total/NA	Solid	8015B NM	17917
890-6072-5	BH24-12	Total/NA	Solid	8015B NM	17917
MB 870-17917/3-A	Method Blank	Total/NA	Solid	8015B NM	17917
LCS 870-17917/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17917
LCSD 870-17917/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17917
880-38742-A-61-N MS	Matrix Spike	Total/NA	Solid	8015B NM	17917
880-38742-A-61-O MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17917

Analysis Batch: 17995

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6072-1	BH24-16	Total/NA	Solid	8015 NM	
890-6072-2	BH24-16	Total/NA	Solid	8015 NM	
890-6072-3	BH24-9	Total/NA	Solid	8015 NM	
890-6072-4	BH24-11	Total/NA	Solid	8015 NM	
890-6072-5	BH24-12	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 72013

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6072-1	BH24-16	Soluble	Solid	DI Leach	
890-6072-2	BH24-16	Soluble	Solid	DI Leach	
890-6072-3	BH24-9	Soluble	Solid	DI Leach	
890-6072-4	BH24-11	Soluble	Solid	DI Leach	
890-6072-5	BH24-12	Soluble	Solid	DI Leach	
MB 880-72013/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72013/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72013/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6072-1 MS	BH24-16	Soluble	Solid	DI Leach	
890-6072-1 MSD	BH24-16	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616

HPLC/IC

Analysis Batch: 72285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6072-1	BH24-16	Soluble	Solid	300.0	72013
890-6072-2	BH24-16	Soluble	Solid	300.0	72013
890-6072-3	BH24-9	Soluble	Solid	300.0	72013
890-6072-4	BH24-11	Soluble	Solid	300.0	72013
890-6072-5	BH24-12	Soluble	Solid	300.0	72013
MB 880-72013/1-A	Method Blank	Soluble	Solid	300.0	72013
LCS 880-72013/2-A	Lab Control Sample	Soluble	Solid	300.0	72013
LCSD 880-72013/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72013
890-6072-1 MS	BH24-16	Soluble	Solid	300.0	72013
890-6072-1 MSD	BH24-16	Soluble	Solid	300.0	72013

Job ID: 890-6072-1

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Project/Site: JRU DI 1A CTB 23E-04616

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Job ID: 890-6072-1

Lab Sample ID: 890-6072-1 Matrix: Solid

Lab Sample ID: 890-6072-2

Lab Sample ID: 890-6072-3

Lab Sample ID: 890-6072-4

Matrix: Solid

Matrix: Solid

Date Collected: 01/26/24 12:00 Date Received: 01/30/24 15:46

Client Sample ID: BH24-16

Client: Vertex

	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	72364	02/07/24 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72580	02/08/24 04:48	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72686	02/08/24 04:48	SM	EET MID
Total/NA	Analysis	8015 NM		1			17995	02/07/24 05:26	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	17917	02/02/24 09:58	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17989	02/07/24 05:26	WP	EET DAL
Soluble	Leach	DI Leach			5.01 g	50 mL	72013	01/31/24 10:21	SMC	EET MID
Soluble	Analysis	300.0		1			72285	02/04/24 16:13	СН	EET MID

Client Sample ID: BH24-16

Date Collected: 01/26/24 12:10

Date Received: 01/30/24 15:46

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	72364	02/07/24 11:42	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72580	02/08/24 05:14	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72686	02/08/24 05:14	SM	EET MID
Total/NA	Analysis	8015 NM		1			17995	02/07/24 05:47	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.08 g	10 mL	17917	02/02/24 09:58	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17989	02/07/24 05:47	WP	EET DAL
Soluble	Leach	DI Leach			4.99 g	50 mL	72013	01/31/24 10:21	SMC	EET MID
Soluble	Analysis	300.0		1			72285	02/04/24 16:28	СН	EET MID

Client Sample ID: BH24-9

Date Collected: 01/24/24 12:00

Date Received: 01/30/24 15:46

	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	72184	02/01/24 17:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72459	02/07/24 17:13	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72686	02/07/24 17:13	SM	EET MID
Total/NA	Analysis	8015 NM		1			17995	02/07/24 06:07	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.94 g	10 mL	17917	02/02/24 09:58	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17989	02/07/24 06:07	WP	EET DAL
Soluble	Leach	DI Leach			5.04 g	50 mL	72013	01/31/24 10:21	SMC	EET MID
Soluble	Analysis	300.0		5			72285	02/04/24 16:33	CH	EET MID

Client Sample ID: BH24-11 Date Collected: 01/24/24 12:40 Date Received: 01/30/24 15:46

	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	72184	02/01/24 17:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72459	02/07/24 17:39	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72686	02/07/24 17:39	SM	EET MID

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Matrix: Solid

Project/Site: JRU DI 1A CTB 23E-04616

Job ID: 890-6072-1

Lab Sample ID: 890-6072-4

Date Collected: 01/24/24 12:40 Date Received: 01/30/24 15:46

Client Sample ID: BH24-11

Client: Vertex

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			17995	02/07/24 06:28	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	17917	02/02/24 09:58	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17989	02/07/24 06:28	WP	EET DAL
Soluble	Leach	DI Leach			5.00 g	50 mL	72013	01/31/24 10:21	SMC	EET MID
Soluble	Analysis	300.0		10			72285	02/04/24 16:38	CH	EET MID

Client Sample ID: BH24-12 Date Collected: 01/24/24 13:00

Date Received: 01/30/24 15:46

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72184	02/01/24 17:03	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72459	02/07/24 18:05	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72686	02/07/24 18:05	SM	EET MID
Total/NA	Analysis	8015 NM		1			17995	02/07/24 06:48	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	17917	02/02/24 09:58	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17989	02/07/24 06:48	WP	EET DAL
Soluble	Leach	DI Leach			4.95 g	50 mL	72013	01/31/24 10:21	SMC	EET MID
Soluble	Analysis	300.0		5			72285	02/04/24 16:43	СН	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300

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

Matrix: Solid

Lab Sample ID: 890-6072-5

Matrix: Solid

	A00		cincation Gammary		
Client: Vertex				Job ID: 890-6072-1	
Project/Site: JRU DI 1A C	TB 23E-04616				
Laboratory: Eurofins	Dallas				2
All accreditations/certifications he	eld by this laboratory are listed	I. Not all accreditations/ce	ertifications are applicable to this report	i.	. –
Authority	Progra	m	Identification Number	Expiration Date	
Texas	NELAP		T104704295-23-34	06-30-24	E
Laboratory: Eurofins	Midland				- 5
Unless otherwise noted, all analy		overed under each accredi	tation/certification below.		. 6
Authority	Progra	m	Identification Number	Expiration Date	
Texas	NELAP		T104704400-23-26	06-30-24	
The following analytes	are included in this report, but	the laboratory is not certif	fied by the governing authority. This lis	st may include analytes	8
• ,	oes not offer certification.	,	, , , , ,		
Analysis Method	Prep Method	Matrix	Analyte		9
Total BTEX		Solid	Total BTEX		
					10

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Method Summary

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Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616

ob	ID:	890	-6072	2-1
00		000	0012	- '

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
300.0	Anions, Ion Chromatography	EPA	EET MID
5035	Closed System Purge and Trap	SW846	EET MID
8015NM Prep	Microextraction	SW846	EET DAL
DI Leach	Deionized Water Leaching Procedure	ASTM	EET MID
	Environmental Protection Agency "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edit	on, November 1986 And Its Updates.	
TAL SOP :	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R			
EET DAL :	= Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300		
EET MID :	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Sample Summary

Client: Vertex Project/Site: JRU DI 1A CTB 23E-04616 Job ID: 890-6072-1

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
390-6072-1	BH24-16	Solid	01/26/24 12:00	01/30/24 15:46	0	
390-6072-2	BH24-16	Solid	01/26/24 12:10	01/30/24 15:46	1	
390-6072-3	BH24-9	Solid	01/24/24 12:00	01/30/24 15:46	0	Ę
390-6072-4	BH24-11	Solid	01/24/24 12:40	01/30/24 15:46	0	
390-6072-5	BH24-12	Solid	01/24/24 13:00	01/30/24 15:46	0	
						1

Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn d Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631 / 245.1 / 7470 / 7471 analyzed These terms and conditions	BRCRA 13PPM Texas 11 AI Sb As Ba Be B TCLP / SPLP 6010 : 8RCRA Sb As Ba Be C TCLP / SPLP 6010 : 8RCRA Sb As Ba Be C sulf purchase order from client company to Eurofins Xenco, its sifiliated hall not assume any responsibility for any losses or expenses incurred by the cli- noject and a charge of \$5 for each sample submitted to Eurofine Xenco, but not reget and a charge of \$5 for each sample submitted to Eurofine Xenco.	otice: Signature of this document and relinquis service. Eurofins Xenco will be liable only for t Euronnas Xenco. A minimum charge of \$85,00
li K Se Ag SiO ₂ Na Sr Hg: 1631 / 245.1	/6020: BRCRA 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr to be analyzed TCLP / SPLP 6010 : BRCRA Sb As Ba Be Cd Cr Co C	
		Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed
		01
	A 12 1 20 00 01 2 1 0 0 0	121- 40 HO
	W 12:00 01	BHJH- 9
	1-26-24 12-10	9Y HCHO
	Sampled Sampled Comp Cont 1	31 12年
Sample Comments	Time Depth Grab/	Sample Identification
NaOH+Ascorbic Acid: SAPC	Corrected Temperature:	
Zn Acetate+NaOH: Zn	N/A Temperature Reading: 70.2	Sample Custody Seals: Yes No
NaHSO 4: NABIS	Thermometer ID:	act:
H3bO4:Hb	10	SAMPLE RECEIPT
H ₂ S0 4: H ₂ NaOH: Na	the lab, if received by 4:30pm	PO #:
lo	IACIUS Due Date:	-
None: NO DI Water: H ₂ O	0H616 Bautine Rush Code	Project Number: 230
ANALYSIS REQUEST Preservative Codes	Turn Around	Project Name: SLU
Car	986-14721 Email: a cdixon a winter.	515
Reporting: Level III Level III PST/UST TRRP Level IV	City, State ZIP: ON WWW	City, State ZIP:
State of Project:	Address:	Address:
) Work Order Comments	- Hiven	Kho
6072	Keinco EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	
902-0300 0) 502-1331 Work Order No. 108215100	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Milliand, TX (432) 704-5440, San Amonto, TX (210) 502-332	eurorins
Napp2331041267	Chain of Custody	

Page 272 of 326

CO CU PD Min Mo NI Se Ag TI U Hg: 1631/245,1/7470/7471 contractors. It assigns standard terms and conditions losses are due to circumstances beyond the control lasses are due to circumstances beyond the control la These terms will be enforced unless previously negotiated.	1/2,2	15	00
	for any losses or cycle units version, the similates and subcontractors. It assigns standard for any losses or cycle by the client if such losses are due to chromstance sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced Date://im/	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any use over our our our very our our service. It is an assumed to be a start of the control of Eurofins Xenco. A minimum charge of \$55.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously nego Reilinquickhed by: (Signature) Received by: (Signature) Received by: (Signature) Received by: (Signature)	of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility in of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each Reilinquicked by: (Signature) Received by: (Signature)
Vi K Se	A 13PPM Texas 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo T TCLP/SPLP6010 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U	8RCRA 13PPM Texas 11 AI Sb Iyzed TCLP / SPLP 6010 : 8RCRA St	Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed vote: Signature of this document and relinguishment of samples cover
	V V V	7 M H 05:01 A	A 01-4-16
		10:40 2 5	81-4CHE
		10-01 2 3	2H24-18
		40	1.1 - NC HG
		1-30.24 10:00 0	Han I I Sout
Sample Comments	t e B	Sampled Sampled Depth Vigor # of	Sample Identification Matrix
NaOH+Ascorbic Acid: SAPC	Ptl	d lemperature: 1, 0	
Zn Acetate+NaOH: Zn	+ (5×		Sample Custody Seals: Yes No (N)A
Na ₂ S ₂ O ₃ : NaSO ₃	(8)	-0-7	Yes No
NaHSO -: NABIS	(8	eter ID: + DK/6	act:
H ₂ SO ₄ : H ₂ NaOH: Na	S2	_	SAMPLE RECEIPT Temp Blank:
))	TAT starts the day received by the lab, if received by 4:30pm	Sampler's Name: AffaultAction C
Cont Cond Mapping)	CTB Due Date:	Project Location: JRUNJ 14
Nope: NO		C Code Code	Project Number: \$30 - UN61
ANALYSIS REQUEST Preservative Codes		rn Around	1
Deliverables: EDD ADaPT Other:		Email:	Phone:
Reporting: Level II Level III PST/UST TRRP Level IV	In his	City, State ZIP:	City, State ZIP: ON UN
0	0.10	Address:	Address: And
Program: UST/PST PRP Brownfields BBC cure-time	NONX O	Company Name:	Company Name: VWM14X /XT
mments	Warren Jones	Bill to: (if different)	Project Manager: Chorn CL, Hui
(0071	Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Hobbs, NM (170
Work Order No: 1082151001	Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Mildan, TX (432) 704-5440, San Antonio, TX (210) 509-3334 IL Pase, TX (1014) 585-3431, 1454-54, TX (2004) 584-146	Environment Testing Houston, TO Xenco Hilbao TX	CUPOTINS Environ
North & John Han	Chain of Custody	0	2

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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our 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 hipped 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 compliance 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 compliance 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 compliance to Eurofins Environment Testing South Central, LLC attention immediately. State, Zip: TX, 75220 BH24-9 (890-6072-3) BH24-16 (890-6072-2) Possible Hazard Identification BH24-11 (890-6072-4) BH24-16 (890-6072-1) Sample Identification - Client ID (Lab ID) Dallas Empty Kit Relinquished by: Deliverable Requested: I, II, III, IV, Other (specify) BH24-12 (890-6072-5) Gity Shipping/Receiving Midland, TX 79701 telinquished by: 5 JRU DI 1A CTB 23E-04616 214-902-0300(Tel) 9701 Harry Hines Blvd, Eurofins Environment Testing South Centr **Client Information** Phone: 432-704-5440 1211 W. Florida Ave **Eurofins Midland** slinquished by: Custody Seals Intact: linquished by: rconfirmed ent Contact: oject Name Yes A No (Sub Contract Lab) Custody Seal No. K Project #: 89000161 Phone: Date/T Primary Deliverable Rank: 2 Due Date Requested: Date/ Date/Time SOW# # OV PO # TAT Requested (days): Sampler. 2/5/2024 Sample Date 1/24/24 1/26/24 1/24/24 1/24/24 1/26/24 Chain of Custody Record Date: Mountain 12:40 Mountain 12:00 Mountain 12:10 Mountai 13:00 Mountai Sample 12:00 Time (C=comp, G=grab) Sample Type Preservation Code: 5 Company Company BT=Tissue, A=Ai Company O=waste/oil Matrix Solid Solid Solid Solid (W=water, Solid S=solid, E-Mail: Lab PM: Jessica.Kramer@et.eurofinsus.com Kramer, Jessica Time: Field Filtered Sample (Yes or No) Accreditations Required (See note): NELAP - Texas Perform MS/MSD (Yes or No) Special Instructions/QC Requirements Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Received by: 8015MOD Calc Cooler Temperature(s) °C and Other Remarks Received by Received by: × \times \times × × 8015MOD_NM/8015NM_S_Prep × × \times × × SU Analysis Requested Ę 6 State of Origin: New Mexico Carrier Tracking No(s): Method of Shipment Date/ I Ime Date/Time This sample shipment is forwarded under chain-of-custody. If the ____ ____ **Total Number of containers** I - Ice J - DI Water K - EDTA L - EDA eurofins F - MeOH G - Amchlor H - Ascorbic Acid B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 COC No: 880-9107.1 Other: Preservation Codes: 890-6072-1 Job #: Page 1 of 1 A - HCL age Special Instructions/Note: 2 U - Acetone V - MCAA W - pH 4-5 Y - Trizma Company Z - other (specify) Company Company **Environment** Testing Ver: 06/08/2021 Months

5

Received by OCD: 4/29/2024 11:25:14 AM

Eurofins Midland 1211 W. Florida Ave Midland, TX 79701	C	Chain of Custody Record	f Cust	ody R	ecol	d				167-3 56		KAINT				•	eu	🔅 eurofins	ns	m	TO INT	Environment Testing	Suits
Client Information (Sub Contract Lab)	Sampler:			Lab PM: Krame	Lab PM: Kramer, Jessica	sica					Carrier Tracking No(s):	[rackin	g No(s)			ωņ	COC No: 880-9107.1	e 07.1					
	Phone:			E-Mail: Jessic	E-Mail: Jessica.Kramer@et.eurofinsus.com	ner@e	Leurofi	nsus.o	om	- (0	State of Origin: New Mexico	Origin: lexicc	-			י ס	Page: Page 1 of 1	of 1					
Company Company Eurofins Environment Testing South Centr					Accreditations Requ	creditations Required (See	quired (S S	see note):	ÿ							<u>ه ک</u>	Job #: 890-6072-1	172-1	1				
Address: 9701 Harry Hines Blvd.	Due Date Requested: 2/5/2024	ä						Ana	nalysis	Requested	leste	ă					Preserv A - HCL	A - HCL M	Code	M - Hexane	xane		
Ciry (Then,) integers () Ciry Dallas	TAT Requested (days):	/s):														10 11	B - NaOH C - Zn Ace	NaOH Zn Acetate		N - None O - AsNaO2 P - Na2O4S	ne NaO2 204S		
State, Zip: TX, 75220	I															ם חו רי	D - Nitric Acid E - NaHSO4 F - MeOH	c Acid ISO4		Q - Na2SO3 R - Na2S2O3	12SO3		
Phone: 214-902-0300(Tel)	PO #:				0)											τQ	G - Amchlor H - Ascorbic	Amchlor Ascorbic Acid		T - TS	P Dod	ט - רובטטיי T - TSP Dodecahydrate U - Acetone	rate
Email:	WO #:					rep											I - Ice J - DI Water	/ater		V - MCAA W - pH 4-5	14-5		
Project Name: .IRU DI 1A CTB 23E-04616	Project #: 89000161					A S P											EDA	2		Y - Trizma Z - other (s	Y - Trizma Z - other (specify)	∍cify)	
Site:	SSOW#:																Otner:						
		Sample (Sample Type (C=comp,	Matrix (W=water, S=solid, O=waste/oil,	eld Filtered rform MS/N	15MOD_Calc 										otal Numbe							
Sample Identification - Client ID (Lab ID)	Sample Date	X	G=grab) BT=Tissue, A=Air Preservation Code:	on Code:	STATE A STATE											Y							
BH24-16 (890-6072-1)	1/26/24	12:00 Mountain		Solid		××										-							
BH24-16 (890-6072-2)	1/26/24	12:10 Mountain		Solid		××					-												
BH24-9 (890-6072-3)	1/24/24	12:00 Mountain		Solid		××										<u> </u>							
BH24-11 (890-6072-4)	1/24/24	12:40 Mountain		Solid		××						-									1		
BH24-12 (890-6072-5)	1/24/24	13:00 Mountain		Solid		×			-														
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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chan-of-custory. It the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing South Central, LLC aboratory or other instructions will be provided. Any charge to accreditation satus 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 compliance to Eurofins Environment Testing South Central, ILC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance 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 compliance to Eurofins Environment Testing South Central, LLC attention immediately.	rent Testing South Cent above for analysis/tests th Central, LLC attentior	ral, LLC places /matrix being a n immediately.	the ownershi analyzed, the s If all requeste	p of method, a samples must d accreditatio	analyte & a be shippe ns are cur	accredita ed back t rent to d	ition com o the Eu ate, retu	pliance ofins Er m the si	upon oi Ivironm gned Cl	r subco ent Tes nain of (ontract ting So Custod	laborat uth Cer / attest	ng to s	C labo	mple s nplian	or oth	ent is fr 1er inst Eurofin:	ruction s Envir	ed unc s will b onmer	ier cha ve prov vt Testi	ided. / ng Sou	Any cha th Cen	If the anges Itral,
Possible Hazard Identification					San	Sample Disposal (A	pie Disposal (A Return To Clier	lient	e may	be as	assessed it sa i Disposal By Lab	ed if: IBy L	ab ab	les al		chive	Archive For	be assessed it samples are retained longer than 1 month)	an 1	Mc	Months		
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	ble Rank: 2			Spe	Special Instructions/QC Requirements	tructior	1S/QC	Requi	emen	ts:												
Empty Kit Relinquished by:	1	Date:			Time:						N	Method of Shipment:	of Shipi	nent:						þ			
Relinquished by:	Date/Time: 62	F	12:00	Company		Received by:	d by:	Ra	4 h	8,2			Date	Date/Time:						Company	Dany		
Relinquished by:	Date/Time:	1 24	125	Company Company		Received by	a phi	SI	5				Date	Date/Time	22	3	41	12	5	Company Company	bany bany		
Custody Seals Intact: Custody Seal No.: ∆ Yes ∆ No						Cooler Temperature(s)	emperat	ure(s) °C	and O	and Other Remarks	marks:					- 50				Ver	80/90	Ver: 06/08/2021	

14

Job Number: 890-6072-1

List Source: Eurofins Carlsbad

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6072 List Number: 1 Creator: Lopez, Abraham

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

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6072 List Number: 3 Creator: Thompson, Christopher

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

14

Job Number: 890-6072-1

List Source: Eurofins Dallas

List Creation: 02/03/24 01:45 PM

14

Job Number: 890-6072-1

List Source: Eurofins Midland

List Creation: 02/01/24 11:02 AM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6072 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Received by OCD: 4/29/2024 11:25:14 AM



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Chance Dixon Vertex 3101 Boyd Dr Carlsbad, New Mexico 88220 Generated 2/12/2024 10:14:06 AM

JOB DESCRIPTION

JRU DI 1A CTB 23E-04616

JOB NUMBER

890-6071-1

Eurofins Carlsbad 1089 N Canal St. Carlsbad NM 88220

See page two for job notos and contact information.



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Eurofins Carlsbad

Job Notes

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

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

Authorization

AMER

Generated 2/12/2024 10:14:06 AM

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

Eurofins Carlsbad is a laboratory within Eurofins Environment Testing South Central, LLC, a company within Eurofins Environment Testing Group of Companies

Laboratory Job ID: 890-6071-1 SDG: 23E-04616

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QC Association Summary	16
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	Definitions/Glassony	
	Definitions/Glossary	
Client: Vertex Project/Site: JF	Job ID: 890-6071- RU DI 1A CTB SDG: 23E-0461	
Qualifiers		
GC VOA		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	
F2	MS/MSD RPD exceeds control limits	
S1+	Surrogate recovery exceeds control limits, high biased.	
U	Indicates the analyte was analyzed for but not detected.	
GC Semi VOA	•	
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	-
S1-	Surrogate recovery exceeds control limits, low biased.	
U	Indicates the analyte was analyzed for but not detected.	
HPLC/IC		
Qualifier	Qualifier Description	
F1	MS and/or MSD recovery exceeds control limits.	-
U	Indicates the analyte was analyzed for but not detected.	
Glossary		-
Abbreviation	These commonly used abbreviations may or may not be present in this report.	_
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis	_
%R	Percent Recovery	
CFL	Contains Free Liquid	
CFU	Colony Forming Unit	
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ		
MCL	EPA recommended "Maximum Contaminant Level"	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	

- MDC Minimum Detectable Concentration (Radiochemistry)
- MDL Method Detection Limit ML Minimum Level (Dioxin)
- MPN Most Probable Number
- Method Quantitation Limit MQL Not Calculated NC
- ND Not Detected at the reporting limit (or MDL or EDL if shown)
- NEG Negative / Absent
- POS Positive / Present Practical Quantitation Limit PQL
- PRES Presumptive Quality Control QC
- RER Relative Error Ratio (Radiochemistry) RL Reporting Limit or Requested Limit (Radiochemistry)
- Relative Percent Difference, a measure of the relative difference between two points RPD
- TEF Toxicity Equivalent Factor (Dioxin)
- TEQ Toxicity Equivalent Quotient (Dioxin)
- TNTC Too Numerous To Count

Client: Vertex Project: JRU DI 1A CTB

Job ID: 890-6071-1

Eurofins Carlsbad

Job Narrative 890-6071-1

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Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/30/2024 3:35 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 1.6°C

Receipt Exceptions

The following samples were received and analyzed from an unpreserved bulk soil jar: BH24-17 (890-6071-1), BH24-17 (890-6071-2), BH24-17 (890-6071-3), BH24-18 (890-6071-4), BH24-18 (890-6071-5) and BH24-18 (890-6071-6).

GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-72744 and 880-72744 and analytical batch 880-72754 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-72602 and analytical batch 880-72754 was outside the upper control limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-72754 recovered under the lower control limit for o-Xylene. The samples associated with this CCV were ran within 12 hours of passing CCV; therefore, the data have been reported.

Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-72744 and analytical batch 880-72754 was outside the upper control 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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 870-17830 and analytical batch 870-17833 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (890-6063-A-28-F MS) and (890-6063-A-28-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-72012 and analytical batch 880-72286 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Job ID: 890-6071-1 SDG: 23E-04616

Client Sample ID: BH24-17

00 35

Sample Depth: 0

Client: Vertex

Lab Sample ID: 890-6071-1

Matrix: Solid

5

Date	Collected:	01/30/24	10:0
Date	Received:	01/30/24	15:3

Project/Site: JRU DI 1A CTB

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		02/09/24 11:55	02/11/24 00:24	1
Toluene	<0.00201	U	0.00201	mg/Kg		02/09/24 11:55	02/11/24 00:24	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/09/24 11:55	02/11/24 00:24	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/09/24 11:55	02/11/24 00:24	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/09/24 11:55	02/11/24 00:24	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/09/24 11:55	02/11/24 00:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			02/09/24 11:55	02/11/24 00:24	1
1,4-Difluorobenzene (Surr)	102		70 - 130			02/09/24 11:55	02/11/24 00:24	1
Method: TAL SOP Total BTEX - T	otal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			02/11/24 00:24	1
- Method: SW846 8015 NM - Diese	l Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1	mg/Kg		·	02/08/24 00:49	1
Method: SW846 8015B NM - Dies Analyte		nics (DRO) Qualifier	(GC) RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)		-	50.1	0mt mg/Kg		02/02/24 16:33	02/08/24 00:49	1
Diesel Range Organics (Over	<50.1		50.1	mg/Kg		02/02/24 10:33	02/08/24 00:49	1
C10-C28)	<50.1	0	50.1	ilig/itg		02/02/24 10:33	02/08/24 00.49	1
Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		02/02/24 16:33	02/08/24 00:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	84		70 - 130			02/02/24 16:33	02/08/24 00:49	1
1-Chlorooctane	78		70 - 130			02/02/24 16:33	02/08/24 00:49	1
Method: EPA 300.0 - Anions, Ion	Chromatograp	ohy - Solubi	le					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	132	F1	5.02	mg/Kg			02/05/24 02:00	1
Client Sample ID: BH24-17						Lab Sar	nple ID: 890-	6071-2
Date Collected: 01/30/24 10:10								ix: Solid
ate Received: 01/30/24 15:35								
and Dentile O								

Sample Depth: 2

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/11/24 00:44	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/11/24 00:44	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/11/24 00:44	1
m-Xylene & p-Xylene	<0.00401	U	0.00401	mg/Kg		02/09/24 11:55	02/11/24 00:44	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/11/24 00:44	1
Xylenes, Total	<0.00401	U	0.00401	mg/Kg		02/09/24 11:55	02/11/24 00:44	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130			02/09/24 11:55	02/11/24 00:44	1
1,4-Difluorobenzene (Surr)	102		70 - 130			02/09/24 11:55	02/11/24 00:44	1

Client Sample Results

Job ID: 890-6071-1
SDG: 23E-04616

liant: Vortax		Clien	nt Sample Res	sults			Job ID: 900	6071 1
lient: Vertex roject/Site: JRU DI 1A CTB							Job ID: 890 SDG: 23I	
lient Sample ID: BH24-17						Lab San	nple ID: 890-	6071-2
ate Collected: 01/30/24 10:10								x: Solid
ate Received: 01/30/24 15:35								
ample Depth: 2								
Method: TAL SOP Total BTEX - Analyte		culation Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401		0.00401	mg/Kg		Fichaica	02/11/24 00:44	1
	-0.00-01	0	0.00401	ilign's			02/11/24 00.44	
Method: SW846 8015 NM - Dies	el Range Organ	ics (DRO) (GC)					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.1	U	50.1	mg/Kg			02/08/24 01:09	1
Method: SW846 8015B NM - Die	sel Range Orga	nics (DRO)	(GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.1	U	50.1	mg/Kg		02/02/24 16:33	02/08/24 01:09	1
Diesel Range Organics (Over	<50.1	U	50.1	mg/Kg		02/02/24 16:33	02/08/24 01:09	1
C10-C28) Oll Range Organics (Over C28-C36)	<50.1	U	50.1	mg/Kg		02/02/24 16:33	02/08/24 01:09	1
- ,	* D	• "6				5	• • •	D 11 F-
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	105		70 - 130			02/02/24 16:33	02/08/24 01:09	1
1-Chlorooctane	94		70 - 130			02/02/24 16:33	02/08/24 01:09	1
Method: EPA 300.0 - Anions, lo	n Chromatogran	hv - Solubi	le					
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
· · · · · · · · · · · · · · · · · · ·						· · · · · · · · · · · · · · · · · · ·	02/05/24 08:36	1
Chloride	82.3		5.04	mg/Kg			02/03/24 08.30	1
-	82.3		5.04	mg/Kg				
-	82.3		5.04	mg/Kg		Lab San	nple ID: 890-	6071-3
Client Sample ID: BH24-17	82.3		5.04	mg/Kg		Lab San	nple ID: 890-	6071-3 x: Solid
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20			5.04	mg/Kg		Lab San	nple ID: 890-	
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35			5.04	mg/Kg		Lab San	nple ID: 890-	
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3		ounds (GC		mg/Kg		Lab San	nple ID: 890-	
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35	e Organic Comp	ounds (GC) Qualifier		mg/Kg	D	Lab San	nple ID: 890-	
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile	e Organic Comp	Qualifier)	Unit	<u>D</u>		nple ID: 890- Matri	x: Solid
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte	e Organic Comp Result	Qualifier U) RL	Unit mg/Kg	<u>D</u>	Prepared	nple ID: 890- Matri Analyzed	x: Solid
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene	e Organic Comp Result <0.00199	Qualifier U U) - <u>RL</u> - 0.00199	Unit mg/Kg mg/Kg	D	Prepared 02/09/24 11:55	nple ID: 890- Matri <u>Analyzed</u> 02/11/24 01:04	x: Solid
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene	e Organic Comp Result <0.00199 <0.00199 <0.00199	Qualifier U U U) 	Unit mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	x: Solid
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene	e Organic Comp Result <0.00199 <0.00199 <0.00199 <0.00398	Qualifier U U U U U) 	Unit mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1 1
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene	e Organic Comp Result <0.00199 <0.00199 <0.00199	Qualifier U U U U U U) 	Unit mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1 1 1 1 1 1 1 1 1
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total	e Organic Comp Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199 <0.00398	Qualifier U U U U U U U) RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	2011 Fac
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate	e Organic Comp Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 %Recovery	Qualifier U U U U U U U) RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 Limits	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 Prepared	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr)	e Organic Comp Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 %Recovery 105	Qualifier U U U U U U U) RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u> </u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate	e Organic Comp Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 %Recovery	Qualifier U U U U U U U) RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 Limits	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 Prepared	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr)	e Organic Comp Result <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 <0.00398 %Recovery 105 106	Qualifier U U U U U U Qualifier) RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 Limits 70 - 130	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr)	e Organic Comp Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 <0.00398 %Recovery 105 106 Total BTEX Calc	Qualifier U U U U U U Qualifier) RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 Limits 70 - 130	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	<u>D</u>	Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1 </td
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX -	e Organic Comp Result <0.00199 <0.00199 <0.00199 <0.00398 <0.00199 <0.00398 <0.00398 %Recovery 105 106 Total BTEX Calc	Qualifier U U U U U Qualifier Qualifier) RL 0.00199 0.00199 0.00199 0.00398 0.00199 0.00398 Limits 70 - 130 70 - 130	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 Prepared 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1 </td
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX - Analyte Total BTEX	e Organic Comp Result <0.00199 <0.00199 <0.00398 <0.00398 <0.00398 %Recovery 105 106 Total BTEX Calc Result <0.00398	Qualifier U U U U U U U Qualifier U Qualifier U) RL 0.00199 0.00199 0.00398 0.00398 0.00398 Limits 70 - 130 70 - 130 70 - 130 RL 0.00398	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 Prepared 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1 </td
Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20 Date Received: 01/30/24 15:35 Sample Depth: 3 Method: SW846 8021B - Volatile Analyte Benzene Toluene Ethylbenzene m-Xylene & p-Xylene o-Xylene Xylenes, Total Surrogate 4-Bromofluorobenzene (Surr) 1,4-Difluorobenzene (Surr) Method: TAL SOP Total BTEX - Analyte	e Organic Comp Result <0.00199 <0.00199 <0.00398 <0.00398 <0.00398 %Recovery 105 106 Total BTEX Calc Result <0.00398 sel Range Organ	Qualifier U U U U U U U Qualifier U Qualifier U) RL 0.00199 0.00199 0.00398 0.00398 0.00398 Limits 70 - 130 70 - 130 70 - 130 RL 0.00398	Unit mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg		Prepared 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 02/09/24 11:55 Prepared 02/09/24 11:55 02/09/24 11:55	Analyzed 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04 02/11/24 01:04	Dil Fac 1 1

Method: SW846 8015B NM - Diesel	Range Organics (DRO) (GC)					
Analyte	Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.5 U	50.5	mg/Kg		02/02/24 16:33	02/08/24 01:30	1

Eurofins Carlsbad

.

Client Sample Results

Job ID: 890-6071-1 SDG: 23E-04616

Client Sample ID: BH24-17

Date Collected: 01/30/24 10:20

Project/Site: JRU DI 1A CTB

Client: Vertex

Date Received: 01/30/24 15:35 Sample Depth: 3

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over	<50.5	U	50.5	mg/Kg		02/02/24 16:33	02/08/24 01:30	1
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		02/02/24 16:33	02/08/24 01:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	97		70 - 130			02/02/24 16:33	02/08/24 01:30	1
1-Chlorooctane	88		70 - 130			02/02/24 16:33	02/08/24 01:30	1

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	77.4		5.03	mg/Kg			02/05/24 08:41	1

Client Sample ID: BH24-18

Date Collected: 01/30/24 10:30 Date Received: 01/30/24 15:35

Sample Depth: 0

Method: SW846 8021B - Volati	ile Organic Comp	ounds (GC)					
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199	mg/Kg		02/09/24 11:55	02/11/24 01:25	1
Toluene	<0.00199	U	0.00199	mg/Kg		02/09/24 11:55	02/11/24 01:25	1
Ethylbenzene	<0.00199	U	0.00199	mg/Kg		02/09/24 11:55	02/11/24 01:25	1
m-Xylene & p-Xylene	<0.00398	U	0.00398	mg/Kg		02/09/24 11:55	02/11/24 01:25	1
o-Xylene	<0.00199	U	0.00199	mg/Kg		02/09/24 11:55	02/11/24 01:25	1
Xylenes, Total	<0.00398	U	0.00398	mg/Kg		02/09/24 11:55	02/11/24 01:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			02/09/24 11:55	02/11/24 01:25	1
1,4-Difluorobenzene (Surr)	103		70 - 130			02/09/24 11:55	02/11/24 01:25	1

Method: TAL SOP Total BTEX - To	tal BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			02/11/24 01:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			02/08/24 01:51	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		02/02/24 16:33	02/08/24 01:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/02/24 16:33	02/08/24 01:51	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/02/24 16:33	02/08/24 01:51	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	93		70 - 130			02/02/24 16:33	02/08/24 01:51	1
1-Chlorooctane	84		70 - 130			02/02/24 16:33	02/08/24 01:51	1

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Matrix: Solid

Lab Sample ID: 890-6071-3 Matrix: Solid 5 с 1 Lab Sample ID: 890-6071-4

Client: Vertex		Client	Sample Re	sults			Job ID: 890	-6071-1
Project/Site: JRU DI 1A CTB							SDG: 23	
Client Sample ID: BH24-18 Date Collected: 01/30/24 10:30 Date Received: 01/30/24 15:35						Lab Sar	nple ID: 890- Matri	6071-4 x: Solic
Sample Depth: 0								
Method: EPA 300.0 - Anions, Ior Analyte		hy - Soluble Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fa
Chloride	255		24.9	mg/Kg			02/05/24 02:35	
Client Sample ID: BH24-18 Date Collected: 01/30/24 10:40 Date Received: 01/30/24 15:35 Sample Depth: 2						Lab Sar	nple ID: 890- Matri	6071-5 x: Solic
_ Method: SW846 8021B - Volatile	Organic Comp	ounds (GC)						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg	. —	02/09/24 11:55	02/11/24 01:45	
Toluene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/11/24 01:45	
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/11/24 01:45	
m-Xylene & p-Xylene	<0.00399	U	0.00399	mg/Kg		02/09/24 11:55	02/11/24 01:45	
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/11/24 01:45	
Xylenes, Total	<0.00399	U	0.00399	mg/Kg		02/09/24 11:55	02/11/24 01:45	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	103		70 _ 130			02/09/24 11:55	02/11/24 01:45	
1,4-Difluorobenzene (Surr)	106		70 - 130			02/09/24 11:55	02/11/24 01:45	
Method: TAL SOP Total BTEX -		culation Qualifier	RL	Unit	D	Prepared	Analyzad	Dil Fac
Total BTEX			0.00399	mg/Kg		Fiepaleu	Analyzed	
- -	\$0.00033	0	0.00333	ilig/itg			02/11/24 01.40	I
Method: SW846 8015 NM - Diese Analyte		ics (DRO) (Go Qualifier	C) RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH			50.0	0mt mg/Kg			02/08/24 02:12	1
_ Method: SW846 8015B NM - Die	aal Banga Orga							
Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0		50.0	mg/Kg		02/02/24 16:33	02/08/24 02:12	1
Diesel Range Organics (Over	<50.0		50.0	mg/Kg		02/02/24 16:33	02/08/24 02:12	
C10-C28)								
Oll Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/02/24 16:33	02/08/24 02:12	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fa
o-Terphenyl	98		70 _ 130			02/02/24 16:33	02/08/24 02:12	
1-Chlorooctane	89		70 - 130			02/02/24 16:33	02/08/24 02:12	1
- Method: EPA 300.0 - Anions, lor	n Chromatograp	hy - Soluble						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	706		49.7	mg/Kg			02/05/24 02:40	10
Client Sample ID: BH24-18						Lab Sar	nple ID: 890-	6071-6
Date Collected: 01/30/24 10:50 Date Received: 01/30/24 15:35 Sample Depth: 4							Matri	x: Solid
	Ormania Comm	ounds (GC)						
wethod: Sw846 8021B - volatile	Organic Comb							
Method: SW846 8021B - Volatile Analyte		Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac

Job ID: 890-6071-1 SDG: 23E-04616

Matrix: Solid

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Lab Sample ID: 890-6071-6

Client Sample ID: BH24-18

Date Collected: 01/30/24 10:50 Date Received: 01/30/24 15:35

Project/Site: JRU DI 1A CTB

Sample Depth: 4

Client: Vertex

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.00201	U	0.00201	mg/Kg		02/09/24 11:55	02/11/24 02:06	1
Ethylbenzene	<0.00201	U	0.00201	mg/Kg		02/09/24 11:55	02/11/24 02:06	1
m-Xylene & p-Xylene	<0.00402	U	0.00402	mg/Kg		02/09/24 11:55	02/11/24 02:06	1
o-Xylene	<0.00201	U	0.00201	mg/Kg		02/09/24 11:55	02/11/24 02:06	1
Xylenes, Total	<0.00402	U	0.00402	mg/Kg		02/09/24 11:55	02/11/24 02:06	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130			02/09/24 11:55	02/11/24 02:06	1
1,4-Difluorobenzene (Surr)	100		70 - 130			02/09/24 11:55	02/11/24 02:06	1
Method: TAL SOP Total BTEX - 1	Total BTEX Cal	culation						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	< 0.00402	U	0.00402	mg/Kg			02/11/24 02:06	1
Total TPH Method: SW846 8015B NM - Die:	<49.6		49.6	mg/Kg			02/08/24 02:32	1
Analyte	• •	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<49.6		49.6	mg/Kg		02/02/24 16:33	02/08/24 02:32	
5 5 ()				5.5			02/08/24 02:32	1
Diesel Range Organics (Over C10-C28)	<49.6	U	49.6	mg/Kg		02/02/24 16:33	02/06/24 02.32	1 1
C10-C28)	<49.6 <49.6		49.6 49.6	mg/Kg mg/Kg		02/02/24 16:33 02/02/24 16:33	02/08/24 02:32	
5 5 X		U		0.0				1
C10-C28) Oll Range Organics (Over C28-C36)	<49.6	U	49.6			02/02/24 16:33	02/08/24 02:32	1
C10-C28) Oll Range Organics (Over C28-C36) Surrogate	<49.6 %Recovery	U	49.6 Limits			02/02/24 16:33 Prepared	02/08/24 02:32 Analyzed	1 1 <i>Dil Fac</i>
C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl	<49.6 <u>%Recovery</u> 98 87	U Qualifier	49.6 Limits 70 - 130 70 - 130			02/02/24 16:33 Prepared 02/02/24 16:33	02/08/24 02:32 Analyzed 02/08/24 02:32	1 1
C10-C28) Oll Range Organics (Over C28-C36) Surrogate o-Terphenyl 1-Chlorooctane	<49.6 <u>%Recovery</u> 98 87 • Chromatograp	U Qualifier	49.6 Limits 70 - 130 70 - 130		D	02/02/24 16:33 Prepared 02/02/24 16:33	02/08/24 02:32 Analyzed 02/08/24 02:32	1 1
Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

				Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1		
Lab Sample ID	Client Sample ID	(70-130)	(70-130)		
390-6070-A-1-E MS	Matrix Spike	102	107		
90-6070-A-1-F MSD	Matrix Spike Duplicate	98	107		
390-6071-1	BH24-17	101	102		- 5
390-6071-2	BH24-17	104	102		
90-6071-3	BH24-17	105	106		1
390-6071-4	BH24-18	101	103		
90-6071-5	BH24-18	103	106		
90-6071-6	BH24-18	101	100		
CS 880-72744/1-A	Lab Control Sample	91	104		
CSD 880-72744/2-A	Lab Control Sample Dup	91	104		
/IB 880-72602/5-A	Method Blank	131 S1+	135 S1+		
MB 880-72744/5-A	Method Blank	129	147 S1+		
Surragata Lagand					
Surrogate Legend BFB = 4-Bromofluorobe					

DFBZ = 1,4-Difluorobenzene (Surr)

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

Matrix: Solid

				Percent Surrogate Recovery (Accept
		OTPH1	1CO1	
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	
890-6063-A-28-F MS	Matrix Spike	0 S1-	107	
90-6063-A-28-G MSD	Matrix Spike Duplicate	0 S1-	104	
390-6071-1	BH24-17	84	78	
390-6071-2	BH24-17	105	94	
390-6071-3	BH24-17	97	88	
390-6071-4	BH24-18	93	84	
890-6071-5	BH24-18	98	89	
390-6071-6	BH24-18	98	87	
_CS 870-17830/1-A	Lab Control Sample	96	102	
LCSD 870-17830/2-A	Lab Control Sample Dup	97	104	
MB 870-17830/3-A	Method Blank	120	115	

Surrogate Legend

OTPH = o-Terphenyl

1CO = 1-Chlorooctane

Job ID: 890-6071-1

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Prep Type: Total/NA

Method: 8021B - Volatile Or

Client: Vertex Project/Site: JRU DI 1A CTB							Job ID: 890 SDG: 23I	
Method: 8021B - Volatile Organ	iic Compo	ounds (GC	;)					3
Lab Sample ID: MB 880-72602/5-A Matrix: Solid Analysis Batch: 72754	МВ	мв				Client Sa	mple ID: Metho Prep Type: ٦ Prep Batch	Total/NA
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/07/24 16:55	02/10/24 04:16	1 6
Toluene	<0.00200	U	0.00200	mg/Kg		02/07/24 16:55	02/10/24 04:16	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/07/24 16:55	02/10/24 04:16	1 7
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/07/24 16:55	02/10/24 04:16	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/07/24 16:55	02/10/24 04:16	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/07/24 16:55	02/10/24 04:16	1
	МВ	MB						9
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	131	S1+	70 - 130			02/07/24 16:55	02/10/24 04:16	1
1,4-Difluorobenzene (Surr)	135	S1+	70 - 130			02/07/24 16:55	02/10/24 04:16	1
 Lab Sample ID: MB 880-72744/5-A						Client Sa	mple ID: Metho	d Blank
Matrix: Solid							Prep Type: 1	
Analysis Batch: 72754							Prep Batch	
· ······ ·········· ···················	МВ	МВ						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/10/24 15:52	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/10/24 15:52	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/10/24 15:52	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		02/09/24 11:55	02/10/24 15:52	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/09/24 11:55	02/10/24 15:52	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/09/24 11:55	02/10/24 15:52	1
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	129		70 - 130			02/09/24 11:55	02/10/24 15:52	1
1,4-Difluorobenzene (Surr)	147	S1+	70 - 130			02/09/24 11:55	02/10/24 15:52	1

Lab Sample ID: LCS 880-72744/1-A Matrix: Solid

Analysis Batch: 72754							Prep Ba	atch: 72744
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.100	0.09301		mg/Kg		93	70 - 130	
Toluene	0.100	0.09073		mg/Kg		91	70 - 130	
Ethylbenzene	0.100	0.07919		mg/Kg		79	70 - 130	
m-Xylene & p-Xylene	0.200	0.1829		mg/Kg		91	70 - 130	
o-Xylene	0.100	0.08163		mg/Kg		82	70 - 130	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-72744/2-A Matrix: Solid Analysis Batch: 72754				Clier	nt Sam	ple ID: I		l Sampl ype: To Batch:	tal/NA
Analysis Batch: 72754							Prep	Batch:	/ 2/ 44
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.100	0.09990		mg/Kg		100	70 - 130	7	35

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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34

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36

34

70 - 130

70 - 130

70 - 130

70 - 130

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

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

<0.00200 U F2 F1

<0.00200 UF1

<0.00399 UF1

<0.00200 UF1

MS MS

%Recovery Qualifier

Lab Sample ID: LCSD 880-72	2744/2-A					Clier	nt Sam	ple ID:	Lab Contro	I Sampl	e Dup
Matrix: Solid								·	Prep 1	Type: To	tal/NA
Analysis Batch: 72754									Prep	Batch:	72744
			Spike	LCSD	LCSD				%Rec		RPD
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene			0.100	0.09304		mg/Kg		93	70 - 130	3	35
Ethylbenzene			0.100	0.07982		mg/Kg		80	70 - 130	1	35
m-Xylene & p-Xylene			0.200	0.1903		mg/Kg		95	70 - 130	4	35
o-Xylene			0.100	0.08694		mg/Kg		87	70 - 130	6	35
	LCSD	LCSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	91		70 - 130								
1,4-Difluorobenzene (Surr)	104		70 - 130								
- Lab Sample ID: 890-6070-A- ⁻	1-E MS							Client	Sample ID	: Matrix	Spike
Matrix: Solid										Type: To	
Analysis Batch: 72754										Batch:	
-	Sample	Sample	Spike	MS	MS				%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Benzene	<0.00200	U F1	0.0996	0.05147	F1	mg/Kg		52	70 - 130		

0.03423 F1

0.02831 F1

0.07212 F1

0.03375 F1

mg/Kg

mg/Kg

mg/Kg

mg/Kg

0.0996

0.0996

0.199

0.0996

Limits 70 - 130 70 - 130

4-Bromofluorobenzene (Surr)	102
1,4-Difluorobenzene (Surr)	107

Lab Sample ID: 890-6070-A-1-F MSD Matrix: Solid Analysis Batch: 72754

1,4-Difluorobenzene (Surr)

Toluene

o-Xylene

Surrogate

Ethylbenzene

m-Xylene & p-Xylene

Analysis Batch: 72754									Prep	Batch:	72744
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.00200	U F1	0.0990	0.06780	F1	mg/Kg		68	70 - 130	27	35
Toluene	<0.00200	U F2 F1	0.0990	0.05148	F2 F1	mg/Kg		52	70 - 130	40	35
Ethylbenzene	<0.00200	U F1	0.0990	0.03587	F1	mg/Kg		36	70 - 130	24	35
m-Xylene & p-Xylene	<0.00399	U F1	0.198	0.08732	F1	mg/Kg		44	70 - 130	19	35
o-Xylene	<0.00200	U F1	0.0990	0.03805	F1	mg/Kg		38	70 - 130	12	35
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	98		70 - 130								

70 - 130

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

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Lab Sample ID: MB 870-17830/3-A Matrix: Solid Analysis Batch: 17833						Client Sa	mple ID: Metho Prep Type: ∃ Prep Batcł	Total/NA
	MB	MB						
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	<50.0	U	50.0	mg/Kg		02/02/24 16:33	02/07/24 18:25	1

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Client: Vertex Project/Site: JRU DI 1A CTB

Lab Sample ID: MB 870-17830	/ 3-A									Client Sa	mple ID: N		
Matrix: Solid											Prep T	ype: To	otal/N/
Analysis Batch: 17833											Prep	Batch:	1783
		MB	MB										
Analyte			Qualifier	R	L	Unit		D	Р	repared	Analyze	ed	Dil Fa
Diesel Range Organics (Over C10-C28)	<	<50.0	U	50.	0	mg/K	g		02/0	2/24 16:33	02/07/24 1	18:25	
Oll Range Organics (Over C28-C36)	<	<50.0	U	50.	0	mg/K	g		02/0	2/24 16:33	02/07/24 1	18:25	
• • •	~ 5			,					_				
Surrogate	%Reco		Qualifier	Limits	_					repared	Analyze		Dil Fa
p-Terphenyl		120		70 - 130						2/24 16:33	02/07/24 1		
-Chlorooctane		115		70 - 130					02/0	2/24 16:33	02/07/24 1	18:25	
Lab Sample ID: LCS 870-17830	0/1-A							C	lient	Sample	ID: Lab Co		
Matrix: Solid											Prep T		
Analysis Batch: 17833												Batch:	1783
				Spike	LCS				-	a -	%Rec		
Analyte				Added		Qualifier	Unit		<u>D</u>	<u>%Rec</u>	Limits		
Gasoline Range Organics (GRO)				1020	833.0		mg/Kg			82	70 - 130		
Diesel Range Organics (Over C10-C28)				1010	906.3		mg/Kg			90	70 - 130		
		LCS											
Surrogate	%Recovery	Qua	lifier	Limits									
o-Terphenyl	96			70 - 130									
1-Chlorooctane	102			70 - 130									
Lab Sample ID: LCSD 870-178	30/2-A						CI	ient	Sam	nole ID: La	ab Control	l Samo	le Du
-	30/2-A						CI	ient	Sam	nple ID: La	ab Control Prep T	-	
Matrix: Solid	30/2-A						CI	ient	Sam	nple ID: La	Prep T	ype: To	otal/N
Matrix: Solid	30/2-A				LCSD	LCSD	CI	ient	Sam	nple ID: L	Prep Ty Prep	-	otal/N : 1783
Matrix: Solid Analysis Batch: 17833	30/2-A			Spike Added		LCSD Qualifier	Cl	ient	Sam D	-	Prep T	ype: To	otal/N : 1783 RP
Matrix: Solid Analysis Batch: 17833 Analyte	30/2-A 			Spike			Unit	ient		%Rec 78	Prep T Prep %Rec	ype: To Batch:	otal/N : 1783 RP Lim
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO)	30/2-A 			Spike Added 1020	Result 791.3		Unit mg/Kg	ient		%Rec	Prep T Prep %Rec Limits 70 - 130	ype: To Batch: RPD 5	otal/N 1783 RP Lim 2
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over	30/2-A 			Spike Added	Result		Unit	ient		%Rec	Prep T Prep %Rec Limits	ype: To Batch: 	otal/N 1783 RP Lim 2
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over	30/2-A	LCS		Spike Added 1020	Result 791.3		Unit mg/Kg	ient		%Rec	Prep T Prep %Rec Limits 70 - 130	ype: To Batch: RPD 5	otal/N : 1783 RP Lim
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28)				Spike Added 1020	Result 791.3		Unit mg/Kg	ient -		%Rec	Prep T Prep %Rec Limits 70 - 130	ype: To Batch: RPD 5	otal/N : 1783 RP Lim
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate	LCSD			Spike Added 1020 1010	Result 791.3		Unit mg/Kg	ient		%Rec	Prep T Prep %Rec Limits 70 - 130	ype: To Batch: RPD 5	otal/N
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl	LCSD %Recovery			Spike Added 1020 1010 Limits	Result 791.3		Unit mg/Kg	ient		%Rec	Prep T Prep %Rec Limits 70 - 130	ype: To Batch: RPD 5	otal/N : 1783 RP Lim
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane	LCSD %Recovery 97 104			Spike Added 1020 1010 <i>Limits</i> 70 - 130	Result 791.3		Unit mg/Kg	ient		%Rec 78 94	Prep T Prep %Rec Limits 70 - 130 70 - 130	ype: To Batch: RPD 5 4	2 2 2 2 2 2 2 2 2 2
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate D-Terphenyl 1-Chlorooctane Lab Sample ID: 890-6063-A-28	LCSD %Recovery 97 104			Spike Added 1020 1010 <i>Limits</i> 70 - 130	Result 791.3		Unit mg/Kg	ient		%Rec 78 94	Prep T %Rec Limits 70 - 130 70 - 130	ype: To Batch: RPD 5 4	c Spik
Matrix: Solid Analysis Batch: 17833 Analyte Basoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate De-Terphenyl I-Chlorooctane Lab Sample ID: 890-6063-A-28 Matrix: Solid	LCSD %Recovery 97 104			Spike Added 1020 1010 <i>Limits</i> 70 - 130	Result 791.3		Unit mg/Kg	ient		%Rec 78 94	Prep T %Rec Limits 70 - 130 70 - 130 70 - Prep T	ype: To Batch: <u>RPD</u> 5 4 Matrix ype: To	c Spik
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate De-Terphenyl 1-Chlorooctane Lab Sample ID: 890-6063-A-28 Matrix: Solid	LCSD %Recovery 97 104	Qua	lifier _	Spike Added 1020 1010 Limits 70 - 130 70 - 130	Result 791.3 944.6	Qualifier	Unit mg/Kg	ient		%Rec 78 94	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 Sample ID: Prep T Prep T	ype: To Batch: RPD 5 4	c Spik
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Lab Sample ID: 890-6063-A-28 Matrix: Solid Analysis Batch: 17833	LCSD %Recovery 97 104 S-F MS Sample	<u>Qua</u>	lifier	Spike Added 1020 1010 Limits 70 - 130 70 - 130 Spike	Result 791.3 944.6 MS	Qualifier	Unit mg/Kg mg/Kg	ient	<u>D</u>	%Rec 78 94 Client S	Prep T Prep %Rec Limits 70 - 130 70 - 130 70 - 130 70 - 130	ype: To Batch: <u>RPD</u> 5 4 Matrix ype: To	c Spik
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Lab Sample ID: 890-6063-A-28 Matrix: Solid Analysis Batch: 17833 Analyte	LCSD %Recovery 97 104 8-F MS Sample Result	Qua Sam Qua	lifier	Spike Added 1020 1010 Limits 70 - 130 70 - 130 Spike Added	Result 791.3 944.6 MS Result	Qualifier MS Qualifier	Unit	ient		%Rec 78 94 Client \$	Prep T Prep T %Rec Limits 70 - 130 70 - 130	ype: To Batch: <u>RPD</u> 5 4 Matrix ype: To	c Spik
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Lab Sample ID: 890-6063-A-28 Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO)	LCSD %Recovery 97 104 A-F MS Sample Result <49.8	Qual Sam Qual U F1	lifier	Spike Added 1020 1010 Limits 70 - 130 70 - 130 Spike Added 1020	Result 791.3 944.6 MS Result 653.1	Qualifier MS Qualifier	- Unit mg/Kg mg/Kg	ient	<u>D</u>	%Rec 78 94 Client S %Rec 64	Prep T %Rec Limits 70 - 130 70 - 130 Sample ID: Prep T %Rec Limits 70 - 130	ype: To Batch: <u>RPD</u> 5 4 Matrix ype: To	c Spik
Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Lab Sample ID: 890-6063-A-28 Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over	LCSD %Recovery 97 104 8-F MS Sample Result	Qual Sam Qual U F1	lifier	Spike Added 1020 1010 Limits 70 - 130 70 - 130 Spike Added	Result 791.3 944.6 MS Result	Qualifier MS Qualifier	Unit	ient	<u>D</u>	%Rec 78 94 Client \$	Prep T Prep T %Rec Limits 70 - 130 70 - 130	ype: To Batch: <u>RPD</u> 5 4 Matrix ype: To	c Spik
Lab Sample ID: LCSD 870-178 Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28) Surrogate o-Terphenyl 1-Chlorooctane Lab Sample ID: 890-6063-A-28 Matrix: Solid Analysis Batch: 17833 Analyte Gasoline Range Organics (GRO) Diesel Range Organics (Over C10-C28)	LCSD %Recovery 97 104 S-F MS Sample Result <49.8 <49.8	Qual Sam Qual U F1	lifier	Spike Added 1020 1010 Limits 70 - 130 70 - 130 Spike Added 1020	Result 791.3 944.6 MS Result 653.1	Qualifier MS Qualifier	- Unit mg/Kg mg/Kg	ient	<u>D</u>	%Rec 78 94 Client S %Rec 64	Prep T %Rec Limits 70 - 130 70 - 130 Sample ID: Prep T %Rec Limits 70 - 130	ype: To Batch: <u>RPD</u> 5 4 Matrix ype: To	c Spik

Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	0	S1-	70 - 130
1-Chlorooctane	107		70 - 130

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

Matulas Callal	8-G MSD									oike Dup	
Matrix: Solid										Type: To	
Analysis Batch: 17833	Commis	Comula	Cuilto	MCD	MOD					Batch:	
Awalada		Sample	Spike		MSD	11		0/ D	%Rec		RPD
Analyte		Qualifier	Added		Qualifier	Unit	<u>D</u>	%Rec	Limits	RPD	Limi
Gasoline Range Organics (GRO)	<49.8		1020	675.8	F1	mg/Kg		66	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.8	U	1010	876.0		mg/Kg		87	70 - 130	2	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
o-Terphenyl	0	S1-	70 - 130								
1-Chlorooctane	104		70 - 130								
lethod: 300.0 - Anions, Io	on Chromat	ography									
Lab Sample ID: MB 880-7201	2/1-A							Client S	Sample ID:	Method	Blanl
Matrix: Solid									Prep	Type: S	oluble
Analysis Batch: 72286											
		MB MB									
Analyte	R	esult Qualifier		RL	Unit		D P	repared	Analyz	zed	Dil Fa
Chloride	<	5.00 U		5.00	mg/K	g			02/05/24	00:36	
Lab Sample ID: LCS 880-720	12/2-A						Client	t Sample	e ID: Lab Co	ontrol S	ample
Matrix: Solid										Type: S	
Analysis Batch: 72286										.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
			Spike	LCS	LCS				%Rec		
Analyte			Added		Qualifier	Unit	D	%Rec	Limits		
Chloride			250	244.5		mg/Kg		98	90 - 110		
Lab Sample ID: LCSD 880-72	012/3_0					Cli	ont San	anio ID: I	Lab Contro	Sampl	o Dur
Matrix: Solid	012/J-A						ent San	ipie ib.		Type: S	
Matrix. Soliu									Fieh	Type. 3	olubie
Analysia Bataby 72296											
Analysis Batch: 72286			Spike	1.050	1.050				% Baa		DDD
Analysis Batch: 72286			Spike		LCSD	1114		% D aa	%Rec	000	
Analyte			Added	Result	LCSD Qualifier	Unit	<u>D</u>	%Rec	Limits		Limi
-			•			Unit mg/Kg	<u>D</u>	%Rec 98		RPD	Limi
Analyte Chloride			Added	Result			<u> </u>	98	Limits 90 - 110	0 le ID: BH	Limi 20
Analyte			Added	Result			<u> </u>	98	Limits 90 - 110	0	Limi 20
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid	IS		Added	Result			<u>D</u>	98	Limits 90 - 110	0 le ID: BH	Limi [*] 20
Analyte Chloride Lab Sample ID: 890-6071-1 M		Sample	Added	Result 245.1			<u>D</u>	98	Limits 90 - 110	0 le ID: BH	
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid Analysis Batch: 72286	Sample	Sample Qualifier	Added 250	Result 245.1 MS	Qualifier		<u>D</u>	98	Limits 90 - 110 lient Sampl Prep	0 le ID: BH	Limit 20 124-17
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid Analysis Batch: 72286 Analyte	Sample	Qualifier	Added 250 Spike	Result 245.1 MS	Qualifier MS Qualifier	mg/Kg		98 Cl	Limits 90 - 110 lient Sampl Prep %Rec	0 le ID: BH	Limi [*] 20
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid Analysis Batch: 72286 Analyte Chloride	Sample Result 132	Qualifier	Added 250 Spike Added	Result 245.1 MS Result	Qualifier MS Qualifier	mg/Kg		98 Cl %Rec 115	Limits 90 - 110 lient Sampl Prep %Rec Limits 90 - 110	le ID: BH Type: S	Limi 20 124-17 oluble
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid Analysis Batch: 72286 Analyte Chloride Lab Sample ID: 890-6071-1 M	Sample Result 132	Qualifier	Added 250 Spike Added	Result 245.1 MS Result	Qualifier MS Qualifier	mg/Kg		98 Cl %Rec 115	Limits 90 - 110 lient Sampl Prep %Rec Limits 90 - 110	le ID: BH Type: S	Limi 2' 124-1 oluble
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid Analysis Batch: 72286 Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid	Sample Result 132	Qualifier	Added 250 Spike Added	Result 245.1 MS Result	Qualifier MS Qualifier	mg/Kg		98 Cl %Rec 115	Limits 90 - 110 lient Sampl Prep %Rec Limits 90 - 110	le ID: BH Type: S	Limi 20 124-17 oluble
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid	Sample Result 132	Qualifier F1	Added 250 Spike Added	Result 245.1 MS Result 420.3	Qualifier MS Qualifier	mg/Kg		98 Cl %Rec 115	Limits 90 - 110 lient Sampl Prep %Rec Limits 90 - 110	le ID: BH Type: S	Limit 20 124-17 oluble
Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid Analysis Batch: 72286 Analyte Chloride Lab Sample ID: 890-6071-1 M Matrix: Solid	Sample Result 132	Qualifier F1	Added 250 Spike Added 251	Result 245.1 MS Result 420.3	Qualifier MS Qualifier F1	mg/Kg		98 Cl %Rec 115	Limits 90 - 110 lient Sampl Prep %Rec Limits 90 - 110 lient Sampl Prep	le ID: BH Type: S	Limit 20 124-17 oluble 124-17 oluble

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Received by OCD: 4/29/2024 11:25:14 AM

QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6071-1

SDG: 23E-04616

GC VOA

Prep Batch: 72602

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
MB 880-72602/5-A	Method Blank	Total/NA	Solid	5035		5
Prep Batch: 72744						
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
890-6071-1	BH24-17	Total/NA	Solid	5035		
890-6071-2	BH24-17	Total/NA	Solid	5035		
890-6071-3	BH24-17	Total/NA	Solid	5035		
890-6071-4	BH24-18	Total/NA	Solid	5035		8
890-6071-5	BH24-18	Total/NA	Solid	5035		
890-6071-6	BH24-18	Total/NA	Solid	5035		9
MB 880-72744/5-A	Method Blank	Total/NA	Solid	5035		
LCS 880-72744/1-A	Lab Control Sample	Total/NA	Solid	5035		
LCSD 880-72744/2-A	Lab Control Sample Dup	Total/NA	Solid	5035		
890-6070-A-1-E MS	Matrix Spike	Total/NA	Solid	5035		
890-6070-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035		

Analysis Batch: 72754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6071-1	BH24-17	Total/NA	Solid	8021B	72744
890-6071-2	BH24-17	Total/NA	Solid	8021B	72744
890-6071-3	BH24-17	Total/NA	Solid	8021B	72744
890-6071-4	BH24-18	Total/NA	Solid	8021B	72744
890-6071-5	BH24-18	Total/NA	Solid	8021B	72744
890-6071-6	BH24-18	Total/NA	Solid	8021B	72744
MB 880-72602/5-A	Method Blank	Total/NA	Solid	8021B	72602
MB 880-72744/5-A	Method Blank	Total/NA	Solid	8021B	72744
LCS 880-72744/1-A	Lab Control Sample	Total/NA	Solid	8021B	72744
LCSD 880-72744/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	72744
890-6070-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	72744
890-6070-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	72744

Analysis Batch: 72866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6071-1	BH24-17	Total/NA	Solid	Total BTEX	
890-6071-2	BH24-17	Total/NA	Solid	Total BTEX	
890-6071-3	BH24-17	Total/NA	Solid	Total BTEX	
890-6071-4	BH24-18	Total/NA	Solid	Total BTEX	
890-6071-5	BH24-18	Total/NA	Solid	Total BTEX	
890-6071-6	BH24-18	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 17830

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6071-1	BH24-17	Total/NA	Solid	8015NM Prep	
890-6071-2	BH24-17	Total/NA	Solid	8015NM Prep	
890-6071-3	BH24-17	Total/NA	Solid	8015NM Prep	
890-6071-4	BH24-18	Total/NA	Solid	8015NM Prep	
890-6071-5	BH24-18	Total/NA	Solid	8015NM Prep	
890-6071-6	BH24-18	Total/NA	Solid	8015NM Prep	
MB 870-17830/3-A	Method Blank	Total/NA	Solid	8015NM Prep	

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QC Association Summary

Client: Vertex Project/Site: JRU DI 1A CTB

GC Semi VOA (Continued)

Prep Batch: 17830 (Continued)

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
LCS 870-17830/1-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 870-17830/2-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-6063-A-28-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-6063-A-28-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	
Analysis Batch: 17833					
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6071-1	BH24-17	Total/NA	Solid	8015B NM	17830
890-6071-2	BH24-17	Total/NA	Solid	8015B NM	17830
890-6071-3	BH24-17	Total/NA	Solid	8015B NM	17830
890-6071-4	BH24-18	Total/NA	Solid	8015B NM	17830
890-6071-5	BH24-18	Total/NA	Solid	8015B NM	17830
890-6071-6	BH24-18	Total/NA	Solid	8015B NM	17830
MB 870-17830/3-A	Method Blank	Total/NA	Solid	8015B NM	17830
LCS 870-17830/1-A	Lab Control Sample	Total/NA	Solid	8015B NM	17830
LCSD 870-17830/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17830
890-6063-A-28-F MS	Matrix Spike	Total/NA	Solid	8015B NM	17830
890-6063-A-28-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17830
Analysis Batch: 17890					

Analysis Batch: 17890

Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
BH24-17	Total/NA	Solid	8015 NM	
BH24-17	Total/NA	Solid	8015 NM	
BH24-17	Total/NA	Solid	8015 NM	
BH24-18	Total/NA	Solid	8015 NM	
BH24-18	Total/NA	Solid	8015 NM	
BH24-18	Total/NA	Solid	8015 NM	
	BH24-17 BH24-17 BH24-17 BH24-18 BH24-18 BH24-18	BH24-17Total/NABH24-17Total/NABH24-17Total/NABH24-18Total/NABH24-18Total/NA	BH24-17Total/NASolidBH24-17Total/NASolidBH24-17Total/NASolidBH24-18Total/NASolidBH24-18Total/NASolid	BH24-17Total/NASolid8015 NMBH24-17Total/NASolid8015 NMBH24-17Total/NASolid8015 NMBH24-18Total/NASolid8015 NMBH24-18Total/NASolid8015 NMBH24-18Total/NASolid8015 NM

HPLC/IC

Leach Batch: 72012

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6071-1	BH24-17	Soluble	Solid	DI Leach	
890-6071-2	BH24-17	Soluble	Solid	DI Leach	
890-6071-3	BH24-17	Soluble	Solid	DI Leach	
890-6071-4	BH24-18	Soluble	Solid	DI Leach	
890-6071-5	BH24-18	Soluble	Solid	DI Leach	
890-6071-6	BH24-18	Soluble	Solid	DI Leach	
MB 880-72012/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-72012/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-72012/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-6071-1 MS	BH24-17	Soluble	Solid	DI Leach	
890-6071-1 MSD	BH24-17	Soluble	Solid	DI Leach	

Analysis Batch: 72286

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
890-6071-1	BH24-17	Soluble	Solid	300.0	72012
890-6071-2	BH24-17	Soluble	Solid	300.0	72012
890-6071-3	BH24-17	Soluble	Solid	300.0	72012
890-6071-4	BH24-18	Soluble	Solid	300.0	72012
890-6071-5	BH24-18	Soluble	Solid	300.0	72012

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Job ID: 890-6071-1 SDG: 23E-04616 Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6071-1 SDG: 23E-04616

HPLC/IC (Continued)

Analysis Batch: 72286 (Continued)

ib Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
0-6071-6	BH24-18	Soluble	Solid	300.0	72012
B 880-72012/1-A	Method Blank	Soluble	Solid	300.0	72012
S 880-72012/2-A	Lab Control Sample	Soluble	Solid	300.0	72012
SD 880-72012/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	72012
0-6071-1 MS	BH24-17	Soluble	Solid	300.0	72012
0-6071-1 MSD	BH24-17	Soluble	Solid	300.0	72012

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Job ID: 890-6071-1 SDG: 23E-04616

Lab Sample ID: 890-6071-1 Matrix: Solid

Date Collected: 01/30/24 10:00 Date Received: 01/30/24 15:35

Client Sample ID: BH24-17

Project/Site: JRU DI 1A CTB

Client: Vertex

Batch	Batch		Dil	Initial	Final	Batch	Prepared			
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	72744	02/09/24 11:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72754	02/11/24 00:24	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72866	02/11/24 00:24	SM	EET MID
Total/NA	Analysis	8015 NM		1			17890	02/08/24 00:49	СС	EET DAL
Total/NA	Prep	8015NM Prep			9.98 g	10 mL	17830	02/02/24 16:33	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 00:49	WP	EET DAL
Soluble	Leach	DI Leach			4.98 g	50 mL	72012	01/31/24 10:17	SMC	EET MID
Soluble	Analysis	300.0		1			72286	02/05/24 02:00	СН	EET MID

Lab Sample ID: 890-6071-2

Lab Sample ID: 890-6071-3

Lab Sample ID: 890-6071-4

Matrix: Solid

Matrix: Solid

Date Received: 01/30/24 15:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	72744	02/09/24 11:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72754	02/11/24 00:44	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72866	02/11/24 00:44	SM	EET MID
Total/NA	Analysis	8015 NM		1			17890	02/08/24 01:09	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.99 g	10 mL	17830	02/02/24 16:33	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 01:09	WP	EET DAL
Soluble	Leach	DI Leach			4.96 g	50 mL	72012	01/31/24 10:17	SMC	EET MID
Soluble	Analysis	300.0		1			72286	02/05/24 08:36	СН	EET MID

Client Sample ID: BH24-17 Date Collected: 01/30/24 10:20

Date Received: 01/30/24 15:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	72744	02/09/24 11:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72754	02/11/24 01:04	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72866	02/11/24 01:04	SM	EET MID
Total/NA	Analysis	8015 NM		1			17890	02/08/24 01:30	CC	EET DAL
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	17830	02/02/24 16:33	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 01:30	WP	EET DAL
Soluble	Leach	DI Leach			4.97 g	50 mL	72012	01/31/24 10:17	SMC	EET MID
Soluble	Analysis	300.0		1			72286	02/05/24 08:41	CH	EET MID

Client Sample ID: BH24-18 Date Collected: 01/30/24 10:30 Date Received: 01/30/24 15:35

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Ргер Туре	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	72744	02/09/24 11:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72754	02/11/24 01:25	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72866	02/11/24 01:25	SM	EET MID

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Matrix: Solid

Client Sample ID: BH24-17 Date Collected: 01/30/24 10:10

Released to Imaging: 5/10/2024 11:00:40 AM

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Lab Chronicle

Job ID: 890-6071-1 SDG: 23E-04616

Lab Sample ID: 890-6071-4 Matrix: Solid

Lab Sample ID: 890-6071-5

Matrix: Solid

Date Collected: 01/30/24 10:30 Date Received: 01/30/24 15:35

Client Sample ID: BH24-18

Project/Site: JRU DI 1A CTB

Client: Vertex

	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			17890	02/08/24 01:51	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	17830	02/02/24 16:33	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 01:51	WP	EET DAL
Soluble	Leach	DI Leach			5.02 g	50 mL	72012	01/31/24 10:17	SMC	EET MID
Soluble	Analysis	300.0		5			72286	02/05/24 02:35	CH	EET MID

Client Sample ID: BH24-18

Date Collected: 01/30/24 10:40 Date Received: 01/30/24 15:35

Batch Batch Dil Initial Final Batch Prepared Prep Type Method Amount Amount Number or Analyzed Туре Run Factor Analyst Lab 5035 Total/NA Prep 5.01 g 5 mL 72744 02/09/24 11:55 MNR EET MID Total/NA Analysis 8021B 5 mL 5 mL 72754 02/11/24 01:45 MNR EET MID 1 Total/NA Total BTEX Analysis 1 72866 02/11/24 01:45 SM EET MID Total/NA Analysis 8015 NM 17890 02/08/24 02:12 СС EET DAL 1 EET DAL Total/NA Prep 8015NM Prep 10.01 g 10 mL 17830 02/02/24 16:33 WP Total/NA Analysis 8015B NM 1 uL 1 uL 17833 02/08/24 02:12 WP EET DAL 1 Soluble Leach **DI Leach** 5.03 g 50 mL 72012 01/31/24 10:17 SMC EET MID Soluble Analysis 300.0 10 72286 02/05/24 02:40 СН EET MID

Client Sample ID: BH24-18

Date Collected: 01/30/24 10:50 Date Received: 01/30/24 15:35 Lab Sample ID: 890-6071-6 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			4.97 g	5 mL	72744	02/09/24 11:55	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	72754	02/11/24 02:06	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			72866	02/11/24 02:06	SM	EET MID
Total/NA	Analysis	8015 NM		1			17890	02/08/24 02:32	CC	EET DAL
Total/NA	Prep	8015NM Prep			10.09 g	10 mL	17830	02/02/24 16:33	WP	EET DAL
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	17833	02/08/24 02:32	WP	EET DAL
Soluble	Leach	DI Leach			5.05 g	50 mL	72012	01/31/24 10:17	SMC	EET MID
Soluble	Analysis	300.0		10			72286	02/05/24 02:45	CH	EET MID

Laboratory References:

EET DAL = Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300 EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

9 10

Accreditation/Certification Summary

Client: Vertex
Project/Site: JRU DI 1A CTE

Job ID: 890-6071-1 SDG: 23E-04616

Laboratory: Eurofins Dallas

All accreditations/certifications held by this laboratory are listed. Not a	all accreditations/certifications are applicable to this report.
---	--

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704295-23-34	06-30-24
			

Laboratory: Eurofins Midland

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

uthority	Program	Program		Expiration Date
exas	NELAP		T104704400-23-26	06-30-24
The following an about			5 - 1 h 4h	
The following analyte	are included in this report, but the	e laboratory is not certi	fied by the governing authority. This lis	st may include analytes
0,	are included in this report, but the loes not offer certification.	e laboratory is not certi	fied by the governing authority. This lis	st may include analytes
0,	1 ,	e laboratory is not certi Matrix	fied by the governing authority. This lis	st may include analyte:

Eurofins Carlsbad

Method Summary

Client: Vertex Project/Site: JRU DI 1A CTB Job ID: 890-6071-1 SDG: 23E-04616

lethod	Method Description	Protocol	Laboratory
021B	Volatile Organic Compounds (GC)	SW846	EET MID
otal BTEX	Total BTEX Calculation	TAL SOP	EET MID
015 NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
015B NM	Diesel Range Organics (DRO) (GC)	SW846	EET DAL
0.00	Anions, Ion Chromatography	EPA	EET MID
035	Closed System Purge and Trap	SW846	EET MID
015NM Prep	Microextraction	SW846	EET DAL
I Leach	Deionized Water Leaching Procedure	ASTM	EET MID
	ASTM International		
	Environmental Protection Agency		
SW846 =	"Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third E	dition, November 1986 And Its Updates.	
TAL SOP	= TestAmerica Laboratories, Standard Operating Procedure		
Laboratory R	eferences:		
EET DAL	= Eurofins Dallas, 9701 Harry Hines Blvd, Dallas, TX 75220, TEL (214)902-0300		
EET MID	= Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440		

Laboratory References:

Eurofins Carlsbad

Released to Imaging: 5/10/2024 11:00:40 AM

Client: Vertex Project/Site: JRU DI 1A CTB

ab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth	
90-6071-1	BH24-17	Solid	01/30/24 10:00	01/30/24 15:35	0	_
90-6071-2	BH24-17	Solid	01/30/24 10:10	01/30/24 15:35	2	
90-6071-3	BH24-17	Solid	01/30/24 10:20	01/30/24 15:35	3	5
90-6071-4	BH24-18	Solid	01/30/24 10:30	01/30/24 15:35	0	
90-6071-5	BH24-18	Solid	01/30/24 10:40	01/30/24 15:35	2	
90-6071-6	BH24-18	Solid	01/30/24 10:50	01/30/24 15:35	4	
						8
						1
						- 2

🐝 eurofins	Environment Testing Xenco	Chain of Custody Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300 Midland, TX (432) 704-5440, San Antonio, TX (210) 509-3334 EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199	Work Order No: <u>1082 15100</u> 1	1 2100 1
Project Manager: CMM/CL Company Name: WWH/PV / Address: Address:	VICON X	different) WOUNU	www.xenco.com Page t Work Order Comments Program: UST/PST PRP Program: UST/PST PRP Brownfields RRC	of
NO.	Email:	City State ZIP:		8P 🗌 Level IV 🗍
Project Number: 236-0	NGL6 Sebutine Dush	d ANALYSIS REQUEST		tive Codes
Project Location: 3200 h. 3 11 Sampler's Name: 4000 ANA UDA	14 CT B Due Date: Due Date: TAT starts the day received by the lab, if received by 4:30pm		Cool: Cool HCL: HC	DI Water: H ₂ O MeOH: Me HNO ₃ : HN
SAMPLE RECEIPT Temp Blank: Samples Received Intact: (Ye) No Cooler Custody Seals: Yes No (NA)	Thermometer ID:	Rey No Balanteters Bolds	H ² D ² HP H ³ D ² HP NaHSO 4: NABIS	NaOH; Na
	Temperature Reading: Corrected Temperature:		Na ₅ 2 ₂ 0 ₃ : Na50 ₃ Zn Acetate+NaOH: Zn	s DH: Zn
Sample Identification	Time	1900	NaOH+Ascorbic Acid: SAPC	Acid: SAPC
1-1- he He		duop	Sample C	Sample Comments
61-4640 81-4640	1 SAN	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Total 200.7 / 6010 200.8 / 6020: Circle Method(s) and Metal(s) to be analyzed	020: 8RCRA 13PPM Texas be analyzed TCLP / SPLP 6010 :	as 11 AI Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo N 0 : 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag TI U	Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Tl Sn U V Zn A Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U Hg: 1631/245.1/7470/7471	
ouce: signature of this occument and relinquishmer f service. Eurofins Xenco will be liable only for the co f Eurofins Xenco. A minimum charge of \$85.00 will b	rouce: signature of this document and relinquishment of samples constitutes a valid purchase order from client co of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any responsibility for any of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample	nonce: signature of this occurrent and relinquishment of samples constitutes a value purchase order from client company to Eurofins Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Eurofins Xenco will be liable only for the cost of samples and shall not assume any tesponsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Eurofins Xenco. A minimum charge of \$85.00 will be applied to each project and a charge of \$5 for each sample submitted to Eurofins Xenco, but not analyzed. These terms will be enforced unless previously regorated.	ms and conditions syond the control uss previously negotated.	
Relinquished by: (Signature)	Received by: (Signature)	Date/Time Relinquished by: (Signature)	eceived by: (Signature)	Date/Time
	alran	$\frac{15.35}{4}$		
(9 ()	Revised Date: 60/25/	8/257 2020.2

Received by OCD: 4/29/2024 11:25:14 AM

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method, analyte & accreditation compliance upon our 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 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 compliance 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 compliance 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 compliance to Eurofins Environment Testing South Central, State, Zip: TX, 75220 BH24-18 (890-6071-5) BH24-17 (890-6071-2) BH24-17 (890-6071-1) Dallas Shipping/Receiving Deliverable Requested: I, II, III, IV, Other (specify) Possible Hazard Identification BH24-18 (890-6071-6) BH24-18 (890-6071-4) BH24-17 (890-6071-3) Sample Identification - Client ID (Lab ID) Eurofins Environment Testing South Centr Relinquished by Empty Kit Relinquished by ^oroject Name: JRU DI 1A CTB 214-902-0300(Tel) ģ **Client Information** Phone: 432-704-5440 Midland, TX 79701 **Eurofins Midland** elinquished by: 9701 Harry Hines Blvd, 1211 W. Florida Ave elinquished by: none Custody Seals Intact: nconfirmed ient Contact y up Yes No (Sub Contract Lab) Custody Seal No.: δ Project #: 89000161 Primary Deliverable Rank: 2 Due Date Requested: 2/5/2024 Phone: Date/Time: Date/Time NO # PO# Sampler Date/Time: Sample Date SSOW# TAT Requested (days) 1/30/24 1/30/24 1/30/24 1/30/24 1/30/24 1/30/24 Chain of Custody Record Mountain 10:10 Date: Mountain 10:40 Mountain 10:30 Mountain 10:20 Mountain 10:50 Mountair Sample Time 10:00 (C=comp, G=grab) BT=Tissue, A=Ar Sample Preservation Code: Type Company Company Company S=solid, O=waste/oil, Matrix Solid Solid (W=water, Solid Solid Solid Solid Lab PM E-Mail Jessica.Kramer@et.eurofinsus.com Kramer, Jessica Field Filtered Sample (Yes or No) Time: NELAP - Texas Accreditations Required (See note) Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return To Client Disposal By Lab Archive For Mont Perform MS/MSD (Yes or No) Special Instructions/QC Requirements Cooler Temperature(s) Charlotter Temperty MUUL Received by Received by 8015MOD_NM/8015NM_S_Prep Received by: × × × × × × × × × × × × 8015MOD_Calc 2 Ha I Analysis Requested State of Origin: New Mexico Carrier Tracking No(s): Method of Shipment: Date/Time Date/Time G Archive For 1 ------Total Number of containers <u>_</u> -----B - NaOH C - Zn Acetate D - Ntric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid eurofins F I - Ice J - DI Water K - EDTA L - EDA COC No: 880-9114.1 A - HCL 99 Preservation Codes: Other: Page 1 of 1 890-6071-1 OD # age Special Instructions/Note: AM N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 U - Acetone V - MCAA W - pH 4-5 Y - Trizma ≤ Z - other (specify) Company Company S - H2SO4 Company F - TSP Dodecahydrate **Environment Testing** è Months - Hexane 06/08/202

5

Job Number: 890-6071-1 SDG Number: 23E-04616

List Source: Eurofins Carlsbad

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6071 List Number: 1 Creator: Lopez, Abraham

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

Job Number: 890-6071-1 SDG Number: 23E-04616

List Source: Eurofins Dallas

List Creation: 02/06/24 10:35 AM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6071 List Number: 3 Creator: Sharp, Michael

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
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	

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").

Job Number: 890-6071-1 SDG Number: 23E-04616

List Source: Eurofins Midland

List Creation: 02/01/24 11:02 AM

Login Sample Receipt Checklist

Client: Vertex

Login Number: 6071 List Number: 2 Creator: Rodriguez, Leticia

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

Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").



February 20, 2024

CHANCE DIXON VERTEX RESOURCE GROUP 420 SOUTH MAIN, SUITE 202 TULSA, OK 74103

RE: JRU DI 1A CTB

Enclosed are the results of analyses for samples received by the laboratory on 02/15/24 14:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

VERTEX RESOURCE GROUP CHANCE DIXON 420 SOUTH MAIN, SUITE 202 TULSA OK, 74103 Fax To: NA

Received:	02/15/2024	Sampling Date:	02/13/2024
Reported:	02/20/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A CTB	Sampling Condition:	Cool & Intact
Project Number:	23E-04616	Sample Received By:	Tamara Oldaker
Project Location:	ХТО		

Sample ID: BH23 - 02 3' (H240727-01)

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/16/2024	ND	2.24	112	2.00	7.58	
Toluene*	<0.050	0.050	02/16/2024	ND	2.23	112	2.00	7.46	
Ethylbenzene*	<0.050	0.050	02/16/2024	ND	2.21	110	2.00	7.30	
Total Xylenes*	<0.150	0.150	02/16/2024	ND	6.64	111	6.00	6.70	
Total BTEX	<0.300	0.300	02/16/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	106	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	02/16/2024	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/16/2024	ND	189	94.5	200	0.957	
DRO >C10-C28*	<10.0	10.0	02/16/2024	ND	193	96.6	200	0.463	
EXT DRO >C28-C36	<10.0	10.0	02/16/2024	ND					
Surrogate: 1-Chlorooctane	86.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	<i>98.3</i>	% 49.1-14	8						

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims based upon any of the above stated reasons or otherwise. Results relate only to the sample identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatscever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including whose site to the services interruptors, loss of profits incurred by client, its subsidiaries, afflictes or successor arising out of or related to the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

aboratories

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 Company Name: Verlex Resource Services (Direct Bill to XTO Fname

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

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FORM-006 R 3.2 10/07/21



February 28, 2024

CHANCE DIXON VERTEX RESOURCE GROUP 420 SOUTH MAIN, SUITE 202 TULSA, OK 74103

RE: JRU DI 1A CTB

Enclosed are the results of analyses for samples received by the laboratory on 02/22/24 13:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



Analytical Results For:

VERTEX RES	OURCE GROUP
CHANCE DIX	ON
420 SOUTH	MAIN, SUITE 202
TULSA OK, 7	'4103
Fax To:	NA

Received:	02/22/2024	Sampling Date:	02/21/2024
Reported:	02/28/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A CTB	Sampling Condition:	Cool & Intact
Project Number:	23E-04616	Sample Received By:	Tamara Oldaker
Project Location:	ХТО		

Sample ID: BH 24 - 19 0' (H240888-01)

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2024	ND	1.96	98.1	2.00	3.72	
Toluene*	<0.050	0.050	02/24/2024	ND	2.05	103	2.00	4.41	
Ethylbenzene*	<0.050	0.050	02/24/2024	ND	2.04	102	2.00	4.48	
Total Xylenes*	<0.150	0.150	02/24/2024	ND	6.22	104	6.00	4.32	
Total BTEX	<0.300	0.300	02/24/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	112 9	% 71.5-13	24						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/27/2024	ND	464	116	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2024	ND	208	104	200	2.24	
DRO >C10-C28*	<10.0	10.0	02/26/2024	ND	203	102	200	0.642	
EXT DRO >C28-C36	<10.0	10.0	02/26/2024	ND					
Surrogate: 1-Chlorooctane	65.7	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	59.7	% 49.1-14	18						

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*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

	VERTEX RESOURCE GROUP
	CHANCE DIXON
	420 SOUTH MAIN, SUITE 202
	TULSA OK, 74103
	Fax To: NA
02/22/2024	Sampling Date:

Received:	02/22/2024	Sampling Date:	02/21/2024
Reported:	02/28/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A CTB	Sampling Condition:	Cool & Intact
Project Number:	23E-04616	Sample Received By:	Tamara Oldaker
Project Location:	ХТО		

Sample ID: BH 24 - 19 1' (H240888-02)

BTEX 8021B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2024	ND	1.96	98.1	2.00	3.72	
Toluene*	<0.050	0.050	02/24/2024	ND	2.05	103	2.00	4.41	
Ethylbenzene*	<0.050	0.050	02/24/2024	ND	2.04	102	2.00	4.48	
Total Xylenes*	<0.150	0.150	02/24/2024	ND	6.22	104	6.00	4.32	
Total BTEX	<0.300	0.300	02/24/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/27/2024	ND	464	116	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2024	ND	208	104	200	2.24	
DRO >C10-C28*	<10.0	10.0	02/26/2024	ND	203	102	200	0.642	
EXT DRO >C28-C36	<10.0	10.0	02/26/2024	ND					
Surrogate: 1-Chlorooctane	54.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	50.1	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

VERTEX RES	OURCE GROUP
CHANCE DIX	(ON
420 SOUTH	MAIN, SUITE 202
TULSA OK, 7	74103
Fax To:	NA

Received:	02/22/2024	Sampling Date:	02/21/2024
Reported:	02/28/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A CTB	Sampling Condition:	Cool & Intact
Project Number:	23E-04616	Sample Received By:	Tamara Oldaker
Project Location:	ХТО		

Sample ID: BH 24 - 20 0' (H240888-03)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2024	ND	1.96	98.1	2.00	3.72	
Toluene*	<0.050	0.050	02/24/2024	ND	2.05	103	2.00	4.41	
Ethylbenzene*	<0.050	0.050	02/24/2024	ND	2.04	102	2.00	4.48	
Total Xylenes*	<0.150	0.150	02/24/2024	ND	6.22	104	6.00	4.32	
Total BTEX	<0.300	0.300	02/24/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	02/27/2024	ND	464	116	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2024	ND	208	104	200	2.24	
DRO >C10-C28*	<10.0	10.0	02/26/2024	ND	203	102	200	0.642	
EXT DRO >C28-C36	<10.0	10.0	02/26/2024	ND					
Surrogate: 1-Chlorooctane	67.4	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	60.0	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

VERTEX RESOURCE GROUP CHANCE DIXON 420 SOUTH MAIN, SUITE 202 TULSA OK, 74103 Fax To: NA

Received:	02/22/2024	Sampling Date:	02/21/2024
Reported:	02/28/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A CTB	Sampling Condition:	Cool & Intact
Project Number:	23E-04616	Sample Received By:	Tamara Oldaker
Project Location:	ХТО		

Sample ID: BH 24 - 20 2' (H240888-04)

BTEX 8021B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/24/2024	ND	1.96	98.1	2.00	3.72	
Toluene*	<0.050	0.050	02/24/2024	ND	2.05	103	2.00	4.41	
Ethylbenzene*	<0.050	0.050	02/24/2024	ND	2.04	102	2.00	4.48	
Total Xylenes*	<0.150	0.150	02/24/2024	ND	6.22	104	6.00	4.32	
Total BTEX	<0.300	0.300	02/24/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	% 71.5-13	4						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/27/2024	ND	464	116	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2024	ND	208	104	200	2.24	
DRO >C10-C28*	<10.0	10.0	02/26/2024	ND	203	102	200	0.642	
EXT DRO >C28-C36	<10.0	10.0	02/26/2024	ND					
Surrogate: 1-Chlorooctane	70.6	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	63.9	% 49.1-14	8						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

VERTEX R	ESOURCE GROUP
CHANCE D	DIXON
420 SOUT	H MAIN, SUITE 202
TULSA OK	, 74103
Fax To:	NA

Received:	02/22/2024	Sampling Date:	02/21/2024
Reported:	02/28/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A CTB	Sampling Condition:	Cool & Intact
Project Number:	23E-04616	Sample Received By:	Tamara Oldaker
Project Location:	ХТО		

Sample ID: BH 24 - 21 0' (H240888-05)

BTEX 8021B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/26/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	02/26/2024	ND	2.12	106	2.00	2.90	
Ethylbenzene*	<0.050	0.050	02/26/2024	ND	2.07	103	2.00	3.32	
Total Xylenes*	<0.150	0.150	02/26/2024	ND	6.07	101	6.00	3.10	
Total BTEX	<0.300	0.300	02/26/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	102	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	368	16.0	02/27/2024	ND	464	116	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2024	ND	208	104	200	2.24	
DRO >C10-C28*	<10.0	10.0	02/26/2024	ND	203	102	200	0.642	
EXT DRO >C28-C36	<10.0	10.0	02/26/2024	ND					
Surrogate: 1-Chlorooctane	77.8	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	69.6	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Analytical Results For:

VERTEX RES	OURCE GROUP
CHANCE DIX	ON
420 SOUTH	MAIN, SUITE 202
TULSA OK, 7	4103
Fax To:	NA

Received:	02/22/2024	Sampling Date:	02/21/2024
Reported:	02/28/2024	Sampling Type:	Soil
Project Name:	JRU DI 1A CTB	Sampling Condition:	Cool & Intact
Project Number:	23E-04616	Sample Received By:	Tamara Oldaker
Project Location:	ХТО		

Sample ID: BH 24 - 21 2' (H240888-06)

BTEX 8021B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/26/2024	ND	2.14	107	2.00	2.70	
Toluene*	<0.050	0.050	02/26/2024	ND	2.12	106	2.00	2.90	
Ethylbenzene*	<0.050	0.050	02/26/2024	ND	2.07	103	2.00	3.32	
Total Xylenes*	<0.150	0.150	02/26/2024	ND	6.07	101	6.00	3.10	
Total BTEX	<0.300	0.300	02/26/2024	ND					
Surrogate: 4-Bromofluorobenzene (PID	96.7	% 71.5-13	4						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	02/27/2024	ND	464	116	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/26/2024	ND	208	104	200	2.24	
DRO >C10-C28*	<10.0	10.0	02/26/2024	ND	203	102	200	0.642	
EXT DRO >C28-C36	<10.0	10.0	02/26/2024	ND					
Surrogate: 1-Chlorooctane	68.9	% 48.2-13	4						
Surrogate: 1-Chlorooctadecane	61.8	% 49.1-14	8						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Project Manager: Chance Dixon	Project Manager: Chance Dixon	o XTO Energy, Ir	1c.)	P.O. #:	L TO			
Address: 3101 Boyd Drive	Ve			P.O. #:				_
City: Carlsbad	State: NM	Zip:		Attn: Garrett Green	o Energy, inc		_	-
Phone #:	575.725,5001 F	×#		Address: 3104 E. Greene	E. Greene St			RO
Project #: 23E-04616	Project	Project Owner: Garrett Green	Green	City: Carlsbad			_	/ M
Project Name: JRU DI 1A CTB				State: NM	Zip: g	00088	-	RO
Project Location:				# 575		0220	-	-
Sampler Name: L. Pullm	27			FIIONE #: 0/0-4	87 / 0-003		-	O/
sampler Name: L. Pullman	an			Fax #:			-	_
FOR LAB USE DIVLY			MATRIX	PRESERV	SAMPLIN		-	_
Lab I.D.		P.	MAIRIX	PRESERV.	SAMPLING	G	BT	_
	Sample I.D.	AB OR (C)OMP	TEWATER	ER : /BASE: COOL ER :				TPH:801
i BH24-19 0'	-19 0'	- #	N S	AI IC O	DO 01 04	10.35	+	+
2 BH24-19 I'	-19 1'	C 1	×		VC 1C CU	10.27	<>	+
3 BH24-20 0'	-20 0'	C 1	×		02 21 24	10.41	+	< >
4 BH24-20 2'	-20 2'	C 1	x			10:47	+	+
5 BH24-21 0	-21 0'	C 1	X			10:52	+	-
6 BH24-21 2	21.2	C 1	x		02.21.24	10:56	X	XX
							+	++
PLEASE NOTE: Labelity and Damages. Cauditor's labelity and or completion of the applicable service. In no event small Caud affliates or successors aroung out of or related to the partic	nal be fable to marce of serve	indhe tased is contact or to al demages including witho It regardless of whether suc	medy to any calon arrang undexe lased in contract or lot, and its levels to be anout placiby the calent for the unalgest. A recidential or consectance's damages including without invation, sustreast interruptions, basis of use, or loss of profile cest interruption by Cardinal, regardines of whether such calent is based upon any of the above stated reasons or others	lectry the claim for the services. All claims of uses of uses of profile mouth of the services of otherwase	100	red by client its subsidiaries.	nce and any office	ther cause y
Relinquished By:	Date: 1-11-14	Received By:	y:		All Cha	Verbal Result: □ Yes □ No Add"I Phone #: All Results are emailed. Please provide Email address: Chance Dixon (CDixon@vertex.ca), Garrett Green (garrett.green@exxonmobil.com)	□ Yes mailed. F Dixon@v	lease p
Kelinquished By:	Time: 33	Time: 33-34 Received By	Mara	Ma	RE	REMARKS: Direct Bill to XTO Energy, Inc., Cost Center CC. Chance Dixon (CDixon@vertex.ca) for Final Report	on (CDixo	lil to XTO Energy, Inc., Cost Center #: 1082151001, Incident #: nAPP2331041267 Dixon@vertex.ca) for Final Report.
Delivered By: ICiante Cart	Corrected Temp. "C	50	Sample Condition Cool Initact	CHECKED BY		umaround Time.	Standard 🕅	Bacteria (only) Sample Condition Observed Temp. C
Delivered By: (Circle One) Sampler - UPS - Bus - Other:			NO NO	fo	2	nometer ID	-	4124

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

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Page 9 of 9

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS

Action 338493

QUESTIONS	
Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	338493
	Action Type:
	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	nAPP2331041267
Incident Name	NAPP2331041267 JAMES RANCH UNIT DI 1A TANK BATTERY @ 0
Incident Type	Produced Water Release
Incident Status	Remediation Plan Received

Location of Release Source

Please answer all the questions in this group.	
Site Name	JAMES RANCH UNIT DI 1A TANK BATTERY
Date Release Discovered	10/26/2023
Surface Owner	Federal

Incident Details

Please answer all the questions in this group.		
Incident Type	Produced Water Release	
Did this release result in a fire or is the result of a fire	No	
Did this release result in any injuries	No	
Has this release reached or does it have a reasonable probability of reaching a watercourse	Νο	
Has this release endangered or does it have a reasonable probability of endangering public health	No	
Has this release substantially damaged or will it substantially damage property or the environment	No	
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No	

Nature and Volume of Release

Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.

Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Other (Specify) Produced Water Released: 9 BBL Recovered: 7 BBL Lost: 2 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Internal corrosion caused a 8" CS main PW line to release fluids to pad. A vac truck recovered all free fluids. A third-party contractor has been retained for remediation purposes.

District I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

QUESTIONS, Page 2

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Action 338493

QUESTIONS (continued) Operator: OGRID: **XTO ENERGY, INC** 5380 6401 Holiday Hill Road Action Number Midland, TX 79707 338493 Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)		
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.	
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	No	
Reasons why this would be considered a submission for a notification of a major release	Unavailable.	
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.		

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a s	afety hazard that would result in injury.
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.
	ation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of ted or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of valuation in the follow-up C-141 submission.
to report and/or file certain release notifications and perform corrective actions for releat the OCD does not relieve the operator of liability should their operations have failed to a	knowledge and understand that pursuant to OCD rules and regulations all operators are required ases which may endanger public health or the environment. The acceptance of a C-141 report by adequately investigate and remediate contamination that pose a threat to groundwater, surface t does not relieve the operator of responsibility for compliance with any other federal, state, or
1	Newsy Alex Devices

	Name: Alan Romero
I hereby agree and sign off to the above statement	Title: Regulatory Analyst
The by agree and eigh on to the above statement	Email: alan.romero1@exxonmobil.com
	Date: 04/29/2024

District I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

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

QUESTIONS, Page 3

Action 338493

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QUESTIONS (conti	nued)
Operator:	OGRID:
XTO ENERGY, INC	5380
6401 Holiday Hill Road	Action Number:
Midland, TX 79707	338493
	Action Type:
	[C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	NM OSE iWaters Database Search
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release ar	id the following surface areas:
A continuously flowing watercourse or any other significant watercourse	Between 500 and 1000 (ft.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 1 and 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Between ½ and 1 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Zero feet, overlying, or within area
Categorize the risk of this well / site being in a karst geology	High
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Requesting a remediation	plan approval with this submission	Yes
Attach a comprehensive report de	monstrating the lateral and vertical extents of soil contamination	on associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.
Have the lateral and vertica	al extents of contamination been fully delineated	Yes
Was this release entirely co	ontained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)		nilligrams per kilograms.)
Chloride	(EPA 300.0 or SM4500 CI B)	12700
TPH (GRO+DRO+MRO)	(EPA SW-846 Method 8015M)	1250
GRO+DRO	(EPA SW-846 Method 8015M)	1250
BTEX	(EPA SW-846 Method 8021B or 8260B)	0
Benzene	(EPA SW-846 Method 8021B or 8260B)	0
which includes the anticipated tim	elines for beginning and completing the remediation.	ed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMA
which includes the anticipated tim		ed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMA 03/08/2024
which includes the anticipated tim On what estimated date wi	elines for beginning and completing the remediation.	
which includes the anticipated tim On what estimated date wi On what date will (or did) th	elines for beginning and completing the remediation. Il the remediation commence	03/08/2024
which includes the anticipated tim On what estimated date wi On what date will (or did) th On what date will (or was)	elines for beginning and completing the remediation. Il the remediation commence ne final sampling or liner inspection occur	03/08/2024 04/24/2024
which includes the anticipated tim On what estimated date wi On what date will (or did) th On what date will (or was) What is the estimated surfa	elines for beginning and completing the remediation. Il the remediation commence ne final sampling or liner inspection occur the remediation complete(d)	03/08/2024 04/24/2024 04/24/2024
which includes the anticipated tim On what estimated date wi On what date will (or did) th On what date will (or was) What is the estimated surfa What is the estimated volum	elines for beginning and completing the remediation. Il the remediation commence ne final sampling or liner inspection occur the remediation complete(d) ace area (in square feet) that will be reclaimed	03/08/2024 04/24/2024 04/24/2024 4200
which includes the anticipated tim On what estimated date wi On what date will (or did) th On what date will (or was) the What is the estimated surfate What is the estimated volutor What is the estimated surfate	elines for beginning and completing the remediation. Il the remediation commence ne final sampling or liner inspection occur the remediation complete(d) ace area (in square feet) that will be reclaimed me (in cubic yards) that will be reclaimed	03/08/2024 04/24/2024 04/24/2024 4200 120

significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

District I

1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

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District III

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District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

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 QUESTIONS (continued)

 Operator:
 OGRID:

 XTO ENERGY, INC
 5380

 6401 Holiday Hill Road
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 Midland, TX 79707
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 Action Type:
 [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants: (Select all answers below that apply.) (Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.) Yes Which OCD approved facility will be used for off-site disposal HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510] OR which OCD approved well (API) will be used for off-site disposal Not answered. OR is the off-site disposal site, to be used, out-of-state Not answered. OR is the off-site disposal site, to be used, an NMED facility Not answered (Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms) Not answered (In Situ) Soil Vapor Extraction Not answered. (In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.) Not answered (In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.) Not answered. (In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.) Not answered. Ground Water Abatement pursuant to 19.15.30 NMAC Not answered. OTHER (Non-listed remedial process) Not answered. Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation 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 Name: Alan Romero Title: Regulatory Analyst I hereby agree and sign off to the above statement Email: alan.romero1@exxonmobil.com Date: 04/29/2024

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

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QUESTIONS (continued)	
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	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)
QUESTIONS	

Deferral Requests Only

Dnly answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued) Operator: OGRID: **XTO ENERGY, INC** 5380 6401 Holiday Hill Road Action Number Midland, TX 79707 338493 Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	340405
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	05/08/2024
What was the (estimated) number of samples that were to be gathered	3
What was the sampling surface area in square feet	600

Remediation Closure Request

Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed. Requesting a remediation closure approval with this submission No

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CONDITIONS

Action 338493

CONDITIONS	
XTO ENERGY, INC	OGRID: 5380
	Action Number: 338493
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CONDITIONS	

Created By	Condition	Condition Date
scwells	Remediation plan approved with conditions. A discrepancy exists on pg. 1 of report where it states the closure criteria for the site is >100 feet Table 1 standards, whereas in Table 2, you say depth to groundwater <50 feet bgs. Pursuant to 19.15.29.12C(4) NMAC, "If a release occurs within the following areas, the responsible party must treat the release as if it occurred less than 50 feet to ground water in Table I of 19.15.29.12 NMAC." This release is within an unstable area therefore the most stringent Table I standards apply for remediation. Ensure vertical delineation is achieved for samples BH24-04, 06, 09, 11, 12 and 13. All samples must be analyzed for all constituents listed in Table I of 19.15.29.12 NMAC. All sidewall samples should be taken from the sidewall of the excavation. Please make sure that the edge of the release extent is accurately defined. Remediation closure report due to OCD by 8/8/2024.	5/10/2024