

JUNE 28, 2019



RELEASE CLOSURE REPORT  
XTO ENERGY, INC. — HARDISON (API#: 30-025-06808)

1RP-3045

Prepared for: XTO Energy, Inc.

Prepared by: Sport Environmental Services, LLC

502 N. Big Spring St.

Midland, TX 79701

[www.sportenv.com](http://www.sportenv.com)



XTO Energy, Inc. — Hardison (1RP-3045)

June 28, 2019

Environmental Specialist Team  
New Mexico Oil Conservation Division  
District 1 (Hobbs)  
1625 N. French Dr.  
Hobbs, NM 882140

**Re: Release Closure Report**  
**XTO Energy, Inc.**  
**F F Hardison B No. 005**  
**RP #: 1RP-3045**  
**Approximate Geographic Coordinates: 32.442357°N, -103.144816°W**  
**Unit Letter O, Section 27, Township 21S, Range 37E**  
**Lea County, New Mexico**

Dear NMOCD Environmental Specialists:

This documentation is being provided as part of XTO Energy, Inc. (*XTO* or *Client*) efforts to address historical releases that may have been addressed in the past, but which appear not to have documentation from the New Mexico Oil Conservation Division (*NMOCD*) clearly demonstrating approved closure of the release. The release referenced above was included in the list of historical releases which occurred prior to August 14, 2018 that are intended to be addressed as described within the “Compliance Agreement for Remediation for Historical Releases” (*Compliance Agreement*) entered into by NMOCD and XTO on November 8, 2018.



### ***Executive Summary***

Sport Environmental Services, LLC has prepared, on behalf of XTO, a Release Closure Report for the F F Hardison B No. 005 (*Hardison* or *subject site*) where, based on a review of NMOCD records, historical pipeline releases had occurred. This request for closure is based on a review of the NMOCD’s Environmental and Administrative Records Database, historical aerial imagery, and confirmation soil sampling which indicated that the release had been addressed in the past, but that paperwork had been misplaced over the years since remedial efforts took place or otherwise not been filed or logged in the relevant systems. The Initial C-141 Form associated with this release did not provide a thorough estimate of the date of the release or its volume, so a review of aerial imagery was performed to better understand where the release had been observed in the past and to establish representative confirmation sample points. An updated Final C-141 Form containing the Closure Request related to this release is available in **Attachment A**. As is detailed further in this report, confirmation soil sampling that was performed on May 6, 2019, demonstrates that the site has been remediated and that concentrations of all relevant constituents are below their respective regulatory limits.

### ***Site Assessment, Characterization, and Groundwater Depth Determination***

As part of assessment and characterization of the subject site, aerial imagery was evaluated for the presence of major watercourses within a 0.5-mile radius of the release site. Aerial imagery demonstrating the absence of such watercourses within a 0.5-mile radius of the release site can be found within **Attachment B**.

A groundwater depth evaluation was performed as well. The relevant New Mexico Office of the State Engineer (NMOSE) and the United States Geological Survey (USGS) databases and GIS query tools were reviewed for groundwater depth information. A 0.5-mile bounding box was utilized when searching the USGS National Water Information System; however, no results appeared within this radius. A similar query was performed using the NMOSE Water Rights Reporting System, and it revealed five (5) wells drilled between 2008 and 2015 located within 0.5-mile of the subject site with a depth to water ranging between 36 and 43 feet. Please see **Figure 1** and **Figure 2** on the following pages for the results of the USGS and NMOSE queries which have established groundwater depth at the site to be approximately 36 feet below ground surface ('bgs'). Therefore, the appropriate remediation standard specified in the NMOCD Table 1 (NMAC 19.15.29.11) will be applied.



USGS Home  
Contact USGS  
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater

Geographic Area: United States

GO

Click to hide News Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Search Results -- No sites found

No sites were found for groundwater level data using your search criteria.

The sites you requested may be available offline. For more information, contact [USGS Water Data Inquiries](#).

lat\_long\_bounding\_box =

Position	Latitude	Longitude
Corner 1	32°00'00.449593"	-103°00'00.153532"
Corner 2	32°00'00.435026"	-103°00'00.136186"


Coordinates are entered as Degrees-Minutes-Seconds (DMS). DMS values are converted to Decimal degrees using NAD83 as the datum. Make your bounding box bigger if you are using NAD27 Datum for your DMS values

Minimum number of 1 levels =

Figure 1. USGS National Water Information System – No results within 0.5-miles of subject site



## New Mexico Office of the State Engineer Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01540 POD1	1	1	1	35	21S	37E	674676	3590844 
<hr/>									
Driller License:	1472	Driller Company: HYDROGEOLOGIC SERVICES, INC.							
Driller Name:	WHALEY, BILL W.								
Drill Start Date:	10/29/2015	Drill Finish Date:	10/29/2015				Plug Date:		
Log File Date:	11/16/2015	PCW Rcv Date:					Source:	Shallow	
Pump Type:		Pipe Discharge Size:					Estimated Yield: 8 GPM		
Casing Size:	4.00	Depth Well:	51 feet				Depth Water:	36 feet	
<hr/>									
Water Bearing Stratifications:		Top	Bottom	Description					
		4	49	Other/Unknown					
<hr/>									
Casing Perforations:		Top	Bottom						
		31	51						

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.

11/7/18 5:59 PM

Page 1 of 1

POD SUMMARY - CP 01540 POD1

**Figure 2.** NMOSE Query Results (Groundwater at 36' bgs)

XTO Energy, Inc. — Hardison (1RP-3045)

Given a groundwater depth of approximately 36'bgs, the appropriate closure criteria for impacted soils at the subject site would appear to be as follows:

**Table 1:** Site Closure Criteria (Adapted from NMOCD Table 1(NMAC 19.15.29.11))

<b>Closure Criteria for Soils Impacted by a Release: Minimum depth below any point within the horizontal boundary of the release to groundwater is less than 50 feet</b>	
<b>Constituent</b>	<b>Limit (mg/Kg)</b>
Chloride	600
TPH (Total Petroleum Hydrocarbons) (GRO+DRO+MRO)	100
BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes)	50
Benzene	10

Remedial activities appear to have taken place at this location; however, the corresponding paperwork and NMOCD submissions could not be located. Therefore, confirmation soil samples were collected from within the footprint of the release as determined by a review of aerial imagery. The release footprint (approximately 37,800 ft<sup>2</sup>) was located near a right-of-way and is displayed on the Release Site Plan denoting sample location placement as shown in **Attachment C**.

### Soil Sampling Protocol and Scope

On May 6, 2019, discrete depth samples were collected utilizing a truck-mounted Geoprobe 540UD direct push unit. Soil samples were collected at the surface (0-1' bgs), 2'bgs, 4' bgs, and 6'bgs or the deepest point of auger refusal (whichever came first). Sample locations were selected to be representative of the affected area and to account for safety concerns regarding the position of safety hazards including subsurface lines and flowlines in the vicinity of the subject site.

Soil at the subject site was homogeneous and did not show visual or olfactory evidence of impact. For this reason, soil lithology data (*i.e.*, boring logs) data was generated only for the soil borehole location where the greatest depth (*i.e.*, 6'bgs at SB1) was prepared for inclusion in this report to show conditions at the site. The boring log is available in **Attachment D**.

All samples were properly collected and preserved in accordance with proper sampling protocols to ensure representative characterization of soils submitted to Eurofins TestAmerica, a NELAP certified laboratory, under proper chain-of-custody for analysis. Each constituent was analyzed using appropriate analytical methods. Chlorides were analyzed using EPA Method 300, Total Petroleum Hydrocarbons (TPH) using Method 8015B, and BTEX constituents on the using Method 8260.

## Soil Sampling Results

Laboratory analytical results confirmed that impacts from the release had been addressed in the past and that the subject site is clean. A summary of results is available in the table below and full analytical results, inclusive of the chain-of-custody, are provided in **Attachment E**.

Table 2. Soil Sampling Results (May 6, 2019 Confirmation Sampling)



Analyte Units	BTEX				Total Petroleum Hydrocarbons (TPH)			Chloride
	Benzene mg/Kg	Toluene mg/Kg	Ethylbenzene mg/Kg	Xylenes, Total mg/Kg	Gasoline Range Organics [C6 - C10] mg/Kg	MRO (C28-C35) mg/Kg	Diesel Range Organics [C10-C28] mg/Kg	Chloride mg/Kg
Closure Criteria for Soils Impacted by a Release where the Depth to Groundwater is Less than 50 feet	10	Total BTEX Limit is 50 mg/Kg			Total TPH Limit is 100 mg/Kg			600
490-173838-1 SB1 @ 0-1' bgs 5/6/2019 12:45 PM	ND	ND	ND	ND	ND	7.39	5.67	ND
490-173838-2 SB1 @ 2' bgs 5/6/2019 12:45 PM	ND	ND	ND	ND	ND	4.31	3.12	ND
490-173838-3 SB1 @ 4' bgs 5/6/2019 12:45 PM	ND	ND	ND	ND	3.09	2.7	ND	ND
490-173838-4 SB1 @ 6' bgs 5/6/2019 1:00 PM	ND	ND	ND	ND	ND	8.32	ND	ND
490-173838-5 SB2 @ 0-1' bgs 5/6/2019 1:18 PM	ND	ND	ND	ND	2.68	3.87	ND	ND
490-173838-6 SB2 @ 2' bgs 5/6/2019 1:18 PM	ND	ND	ND	ND	4.15	13.3	6.99	ND
490-173838-7 SB2 @ 4' bgs 5/6/2019 1:18 PM	ND	ND	ND	ND	2.82	2.83	ND	15.1
490-173838-8 SB3 @ 5' bgs 5/6/2019 2:00 PM	ND	ND	ND	ND	2.23	8.69	ND	9.43
490-173838-9 SB3 @ 0-1' bgs 5/6/2019 1:47 PM	ND	ND	ND	ND	3.1	34.3	13.5	ND
490-173838-10 SB3 @ 2' bgs 5/6/2019 1:47 PM	ND	ND	ND	ND	ND	6.72	ND	ND
490-173838-11 SB3 @ 4' bgs 5/6/2019 1:47 PM	ND	ND	ND	ND	2.55	3.63	ND	ND
490-173838-12 SB4 @ 0-1' bgs 5/6/2019 2:20 PM	ND	ND	ND	ND	4.28	4.79	ND	ND
490-173838-13 SB4 @ 2' bgs 5/6/2019 2:20 PM	ND	ND	ND	ND	ND	2.66	ND	12.2
490-173838-14 SB4 @ 4' bgs 5/6/2019 2:20 PM	ND	ND	ND	ND	2.82	3.79	ND	51.9





### Geo-tagged Site Photographs

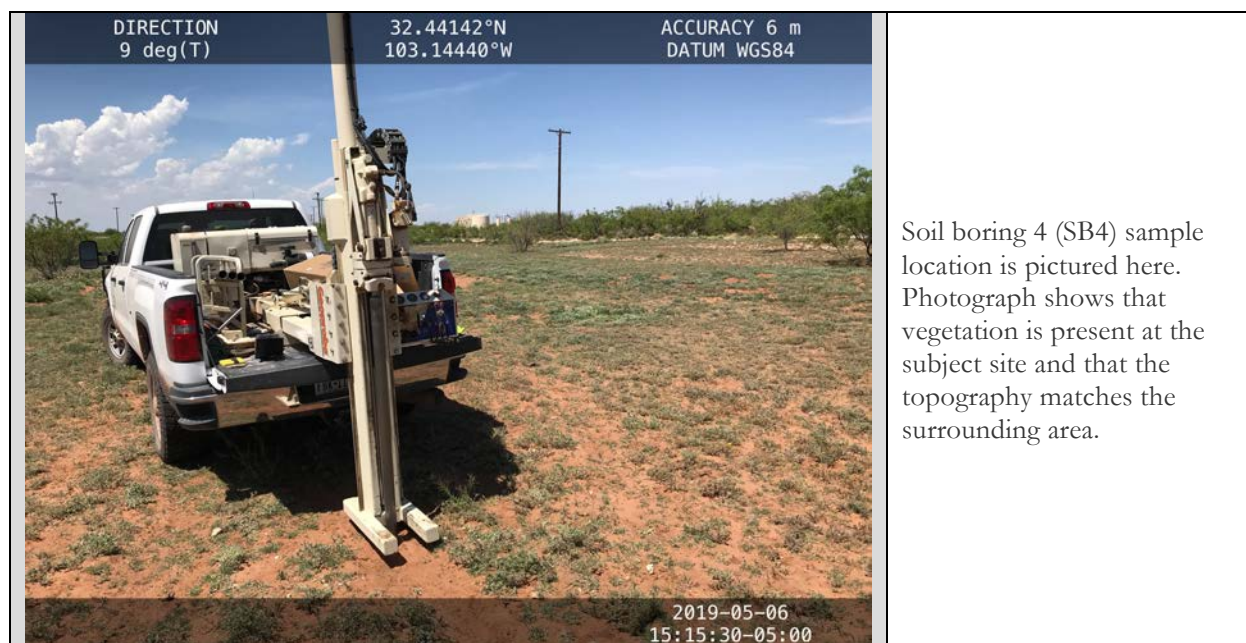
Photographs demonstrating facility congestion and the removal of free liquids are provided in the photographic log below. All geotagged photographs contain the geographic coordinates, date, time, and other data associated with their capture.

#### Photographic Log: May 6, 2019

Photograph	Description
<div data-bbox="289 472 974 520"> DIRECTION 32.44236°N ACCURACY 4 m  79 deg(T) 103.14476°W DATUM WGS84 </div> 	<p>The subject site is visible and vegetation is present. Hand-augering was the only means of sampling possible in this location due to safety concerns including the presence of flowlines and underground piping. The site is also located near a railway line and electrical power lines.</p> <p>This photograph was captured in February 2019 during a pre-sampling site survey to assess the location.</p>
<div data-bbox="289 1098 974 1146"> DIRECTION 32.44226°N ACCURACY 6 m  36 deg(T) 103.14468°W DATUM WGS84 </div> 	<p>Soil boring 1 (SB1) sample location is pictured here. Photograph shows that vegetation is present at the subject site and that the topography matches the surrounding area.</p>



<div><div><div>DIRECTION 36 deg(T)</div><div>32.44173°N 103.14460°W</div><div>ACCURACY 6 m DATUM WGS84</div></div><div><div>2019-05-06 14:12:16-05:00</div></div></div>	<p>Soil boring 2 (SB2) sample location is pictured here. Photograph shows that vegetation is present at the subject site and that the topography matches the surrounding area.</p>
<div><div><div>DIRECTION 18 deg(T)</div><div>32.44140°N 103.14429°W</div><div>ACCURACY 4 m DATUM WGS84</div></div><div><div>2019-05-06 14:41:34-05:00</div></div></div>	<p>Soil boring 3 (SB3) sample location is pictured here. Photograph shows that vegetation is present at the subject site and that the topography matches the surrounding area.</p>



### ***Request for Release Closure - Confirmation Sampling Demonstrates Subject Site is Remediated***

Based on the analytical data provided herein, the concentrations of all constituents (i.e., Chlorides, TPH, Benzene, Toluene, Ethylbenzene, and Xylenes) at the subject site were below their respective limits as confirmed by the analytical data provided herein. Based on a review of aerial imagery and this confirmation sampling, it would appear that work was performed by the client in the past and that the remedial tasks were successful in restoring the subject site to its pre-release conditions. Vegetation has been reestablished and the topography of the location is similar to its surroundings.

Sport Environmental, on behalf of XTO Energy requests that closure status be granted for the F F Hardison B No.005 which was assigned the 1R-3045 identifier. If NMOCD have any further questions or comments regarding this request for closure, please contact us at (432) 683-1100.

Sincerely,

*Deborah S. Moore*

Deborah S. Moore, ME, REPA, CESCO, RSO  
**President/Environmental Engineer**  
**Sport Environmental Services, LLC**

cc: Mr. Shelby Pennington (XTO Energy, Inc.)

*List of Attachments:*

- A NMOCD Form C-141 (Closure)*
- B 0.5-Mile Radius Map Denoting Absence of Major Watercourses*
- C Release Site Plan Denoting Sample Locations*
- D Boring Log*
- E Full Analytical Results and Chain-of-Custody*

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

State of New Mexico  
Energy Minerals and Natural  
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

## Release Notification

### Responsible Party

Responsible Party XTO Energy, Inc.	OGRID 5380
Contact Name Shelby Pennington, Environmental Coordinator	Contact Telephone (281) 723-9353
Contact email shelby_pennington@xtoenergy.com	Incident # (assigned by OCD)
Contact mailing address 6401 Holiday Hill Road, Midland, TX 79707	

### Location of Release Source

Latitude 32.442357°N \_\_\_\_\_ Longitude -103.144816°W \_\_\_\_\_  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name F F Hardison B No. 005 "Hardison Spill Site"	Site Type Production Flowlines
Date Release Discovered Prior to 2014	API# (if applicable) 30-025-06808

Unit Letter	Section	Township	Range	County
O	27	21S	37E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Private \_\_\_\_\_)

### Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 10 (unknown - historical)	Volume Recovered (bbls) 10 (unknown - historical)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 10 (unknown - historical)	Volume Recovered (bbls) 10 (unknown - historical)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Based on confirmation sampling indicating no exceedance of chloride threshold)
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release This release was reported in 2014 as being associated with past operations. The original C-141 listed the cause as "unknown" and as "historical pipeline releases". A review of historical aerial imagery suggests that flowlines leaked in this area in the past and that the area was remediated.

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	
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Application ID	

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

**Initial Response**

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> 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: <u>Shelby Pennington</u> Title: <u>Environmental Coordinator</u> Signature: <u>Shelby Pennington</u> Date: <u>7/1/19</u> email: <u>shelby_pennington@xtoenergy.com</u> Telephone: <u>281-723-9353</u>
<b><u>OCD Only</u></b>  Received by: _____ Date: _____



Incident ID	
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Facility ID	
Application ID	

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discovery date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>36</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico  
Oil Conservation Division

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

Printed Name: Shelby Pennington \_\_\_\_\_ Title: Environmental Coordinator

Signature: Shelby Pennington \_\_\_\_\_ Date: 7/1/19 \_\_\_\_\_

email: shelby\_pennington@xtoenergy.com Telephone: 281-723-9353 \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
District RP	
Facility ID	
Application ID	

## Remediation Plan

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

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

**Closure Report Attachment Checklist:** *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ \*Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection) **\*Not Applicable – the area associated with this historical release had already been backfilled several years ago and vegetation had regrown. Current photos of the site were captured at each borehole location.**
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Shelby Pennington Title: Environmental Coordinator

Signature: *Shelby Pennington* Date: 7/1/19

email: shelby\_pennington@xtoenergy.com Telephone: 281-723-9353

### **OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: *Brittany Hall* Date: 3/13/2023

Printed Name: Brittany Hall Title: Environmental Specialist

## Attachment A

### NMOCD Form C-141 (Closure)



## Attachment B

### 0.5-Mile Radius Map Demonstrating Absence of Major Watercourses





## XTO Energy, Inc. - Hardison (1RP-3045)

No major watercourses are present within a 0.5-mile radius of the subject site.

Source: Google Earth (Image dated: February 20, 2019)

Location: 32.442357°, -103.144816°

### Legend

-  Hardison 0.5-mi radius
-  Hardison Spill Site (3045)





Attachment C

Release Site Plan  
Depicting Sample Locations



# XTO Energy, Inc. - Hardison (1RP-3045)

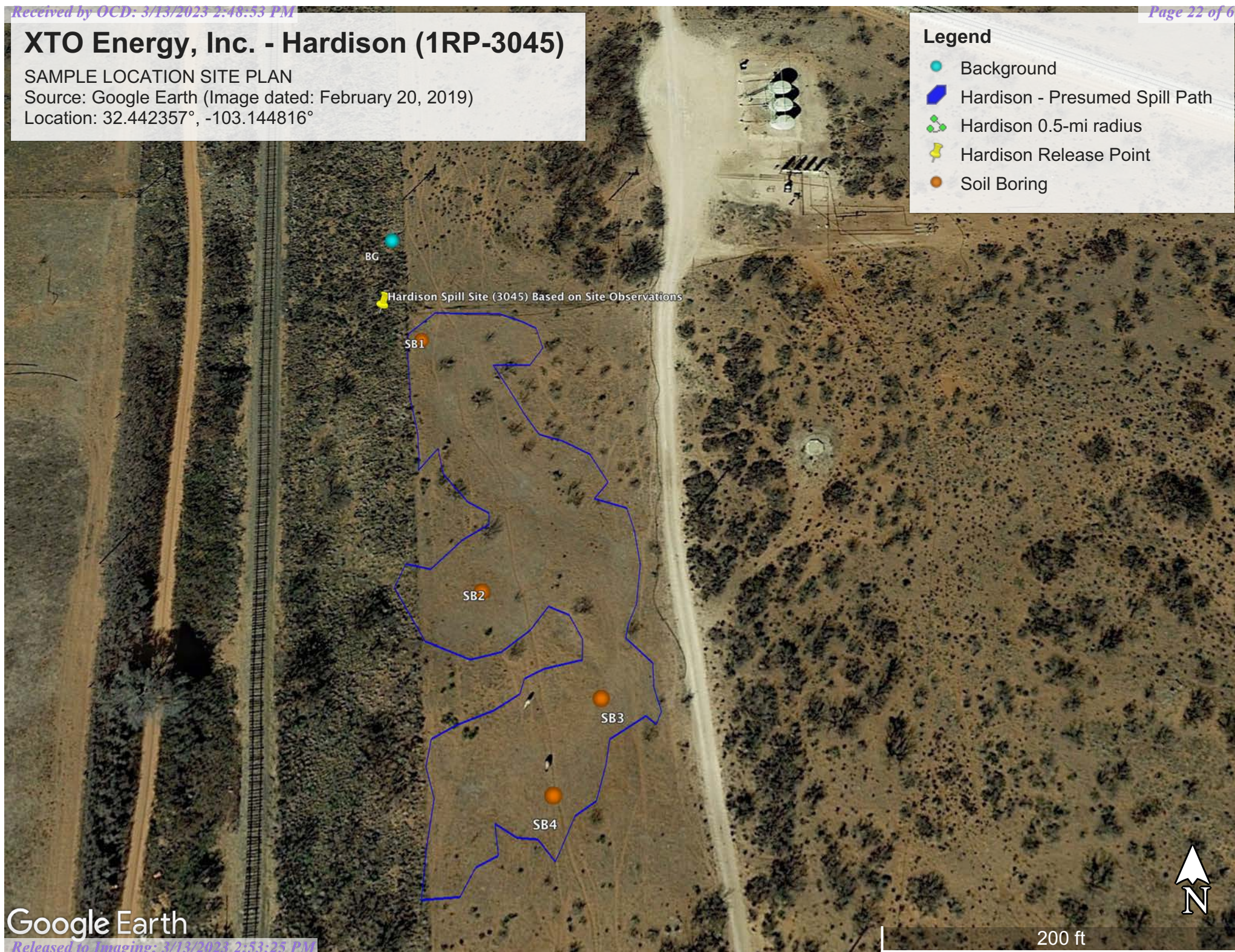
## SAMPLE LOCATION SITE PLAN

Source: Google Earth (Image dated: February 20, 2019)

Location: 32.442357°, -103.144816°

### Legend

- Background
- Hardison - Presumed Spill Path
- Hardison 0.5-mi radius
- Hardison Release Point
- Soil Boring






## Attachment D

### Boring Log





Released to Imaging: 3/13/2023 2:53:25 PM

	<b>Client:</b> XTO Energy, Inc. <b>Project:</b> Hardison (1RP-3045) <b>Address:</b> 502 N. Big Spring St., Midland, TX	<b>BORING LOG</b> <b>Boring No.</b> SB1 <b>Page:</b> 1 of 1
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<b>Drilling Start Date:</b> 05/06/2019 13:40 <b>Drilling End Date:</b> 05/06/2019 14:05 <b>Drilling Company:</b> Sport Environmental Services, LLC <b>Drilling Method:</b> Direct Push <b>Drilling Equipment:</b> Geoprobe 540UD <b>Driller:</b> Clint Elliott <b>Logged By:</b> Cianna Logie	<b>Boring Depth (ft):</b> 6.0 <b>Boring Diameter (in):</b> 2.25 <b>Sampling Method(s):</b> <b>DTW During Drilling (ft):</b> N/A <b>DTW After Drilling (ft):</b> N/A <b>Ground Surface Elev. (ft):</b> 3,397.00 <b>Location (Lat, Long):</b> 32.442357, 103.144816
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DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		ELEVATION (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Poorly graded SAND with clay (SP-SC); mostly fine-medium grained sand, trace fine gravel, little silt, few clay, very loose, dry, 10YR (5/4) yellowish brown, some blow sand in the top two inches. No odor. No visual staining.			
								(2') Sandy elastic SILT (MH); some fine-medium sand, little silt, some clay, medium plasticity, soft, moist, 7.5YR (5/4) brown, no odor, no visual staining.			3395
5								(6') Boring terminated due to auger refusal. Caliche encountered.			3390
10											

NOTES:

## Attachment E

### Full Analytical Results and Chain-of-Custody



Environment Testing  
TestAmerica

## ANALYTICAL REPORT

Eurofins TestAmerica, Nashville  
2960 Foster Creighton Drive  
Nashville, TN 37204  
Tel: (615)726-0177

Laboratory Job ID: 490-173838-1

Laboratory Sample Delivery Group: 1RP-3045  
Client Project/Site: Hardison Spill Site Delineation

For:

Sport Environmental Services LLC  
502 N Big Spring St  
Midland, Texas 79701

Attn: Debi Sport Moore

Authorized for release by:  
5/20/2019 4:41:39 PM

Jennifer Gambill, Project Manager I  
(615)301-5044  
[jennifer.gambill@testamericainc.com](mailto:jennifer.gambill@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Laboratory Job ID: 490-173838-1  
SDG: 1RP-3045

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## Sample Summary

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-173838-1	SB1 @ 0-1' bgs	Solid	05/06/19 12:45	05/11/19 09:05
490-173838-2	SB1 @ 2' bgs	Solid	05/06/19 12:45	05/11/19 09:05
490-173838-3	SB1 @ 4' bgs	Solid	05/06/19 12:45	05/11/19 09:05
490-173838-4	SB1 @ 6' bgs	Solid	05/06/19 13:00	05/11/19 09:05
490-173838-5	SB2 @ 0-1' bgs	Solid	05/06/19 13:18	05/11/19 09:05
490-173838-6	SB2 @ 2' bgs	Solid	05/06/19 13:18	05/11/19 09:05
490-173838-7	SB2 @ 4' bgs	Solid	05/06/19 13:18	05/11/19 09:05
490-173838-8	SB3 @ 5' bgs	Solid	05/06/19 14:00	05/11/19 09:05
490-173838-9	SB3 @ 0-1' bgs	Solid	05/06/19 13:47	05/11/19 09:05
490-173838-10	SB3 @ 2' bgs	Solid	05/06/19 13:47	05/11/19 09:05
490-173838-11	SB3 @ 4' bgs	Solid	05/06/19 13:47	05/11/19 09:05
490-173838-12	SB4 @ 0-1' bgs	Solid	05/06/19 14:20	05/11/19 09:05
490-173838-13	SB4 @ 2' bgs	Solid	05/06/19 14:20	05/11/19 09:05
490-173838-14	SB4 @ 4' bgs	Solid	05/06/19 14:20	05/11/19 09:05

Eurofins TestAmerica, Nashville

# Case Narrative

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Job ID: 490-173838-1

Laboratory: Eurofins TestAmerica, Nashville

Narrative

Job Narrative  
490-173838-1

Comments

No additional comments.

Receipt

The samples were received on 5/11/2019 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.3° C.

GC/MS VOA

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-595966.

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

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## Definitions/Glossary

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## Qualifiers

## GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB1 @ 0-1' bgs

Lab Sample ID: 490-173838-1

Date Collected: 05/06/19 12:45

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00192	0.000643	mg/Kg	-	05/13/19 13:58	05/17/19 17:57	1
Ethylbenzene	ND		0.00192	0.000643	mg/Kg	-	05/13/19 13:58	05/17/19 17:57	1
Toluene	ND		0.00192	0.000710	mg/Kg	-	05/13/19 13:58	05/17/19 17:57	1
Xylenes, Total	ND		0.00576	0.00118	mg/Kg	-	05/13/19 13:58	05/17/19 17:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 130	05/13/19 13:58	05/17/19 17:57	1
4-Bromofluorobenzene (Surr)	100		70 - 130	05/13/19 13:58	05/17/19 17:57	1
Dibromofluoromethane (Surr)	99		70 - 130	05/13/19 13:58	05/17/19 17:57	1
Toluene-d8 (Surr)	105		70 - 130	05/13/19 13:58	05/17/19 17:57	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.36	2.18	mg/Kg	-	05/13/19 13:58	05/16/19 20:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		50 - 150	05/13/19 13:58	05/16/19 20:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	5.67		4.96	2.48	mg/Kg	-	05/17/19 11:15	05/18/19 12:12	1
MRO (C28-C35)	7.39		4.96	2.48	mg/Kg	-	05/17/19 11:15	05/18/19 12:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	108		50 - 150	05/17/19 11:15	05/18/19 12:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		9.96	6.97	mg/Kg	-		05/15/19 15:44	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB1 @ 2' bgs

Lab Sample ID: 490-173838-2

Date Collected: 05/06/19 12:45

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00185	0.000618	mg/Kg	-	05/13/19 13:58	05/17/19 18:27	1
Ethylbenzene	ND		0.00185	0.000618	mg/Kg	-	05/13/19 13:58	05/17/19 18:27	1
Toluene	ND		0.00185	0.000683	mg/Kg	-	05/13/19 13:58	05/17/19 18:27	1
Xylenes, Total	ND		0.00554	0.00113	mg/Kg	-	05/13/19 13:58	05/17/19 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 130	05/13/19 13:58	05/17/19 18:27	1
4-Bromofluorobenzene (Surr)	95		70 - 130	05/13/19 13:58	05/17/19 18:27	1
Dibromofluoromethane (Surr)	102		70 - 130	05/13/19 13:58	05/17/19 18:27	1
Toluene-d8 (Surr)	101		70 - 130	05/13/19 13:58	05/17/19 18:27	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.50	2.25	mg/Kg	-	05/13/19 13:58	05/16/19 21:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		50 - 150	05/13/19 13:58	05/16/19 21:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.12	J	4.87	2.44	mg/Kg	-	05/17/19 11:15	05/18/19 12:30	1
MRO (C28-C35)	4.31	J	4.87	2.44	mg/Kg	-	05/17/19 11:15	05/18/19 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	118		50 - 150	05/17/19 11:15	05/18/19 12:30	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		9.95	6.97	mg/Kg	-		05/15/19 16:19	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB1 @ 4 bgs

Lab Sample ID: 490-173838-3

Date Collected: 05/06/19 12:45

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00179	0.000600	mg/Kg	-	05/13/19 13:58	05/17/19 18:57	1
Ethylbenzene	ND		0.00179	0.000600	mg/Kg	-	05/13/19 13:58	05/17/19 18:57	1
Toluene	ND		0.00179	0.000663	mg/Kg	-	05/13/19 13:58	05/17/19 18:57	1
Xylenes, Total	ND		0.00538	0.00110	mg/Kg	-	05/13/19 13:58	05/17/19 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 130	05/13/19 13:58	05/17/19 18:57	1
4-Bromofluorobenzene (Surr)	93		70 - 130	05/13/19 13:58	05/17/19 18:57	1
Dibromofluoromethane (Surr)	100		70 - 130	05/13/19 13:58	05/17/19 18:57	1
Toluene-d8 (Surr)	102		70 - 130	05/13/19 13:58	05/17/19 18:57	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	3.09	J	4.28	2.14	mg/Kg	-	05/13/19 13:58	05/16/19 22:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		50 - 150	05/13/19 13:58	05/16/19 22:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.91	2.45	mg/Kg	-	05/17/19 11:15	05/18/19 03:57	1
MRO (C28-C35)	2.70	J	4.91	2.45	mg/Kg	-	05/17/19 11:15	05/18/19 03:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	129		50 - 150	05/17/19 11:15	05/18/19 03:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.1	7.04	mg/Kg	-		05/15/19 16:31	1

Eurofins TestAmerica, Nashville



## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB1 @ 6' bgs

Lab Sample ID: 490-173838-4

Date Collected: 05/06/19 13:00

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00184	0.000617	mg/Kg	-	05/13/19 13:58	05/17/19 19:27	1
Ethylbenzene	ND		0.00184	0.000617	mg/Kg	-	05/13/19 13:58	05/17/19 19:27	1
Toluene	ND		0.00184	0.000681	mg/Kg	-	05/13/19 13:58	05/17/19 19:27	1
Xylenes, Total	ND		0.00552	0.00113	mg/Kg	-	05/13/19 13:58	05/17/19 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 130	05/13/19 13:58	05/17/19 19:27	1
4-Bromofluorobenzene (Surr)	94		70 - 130	05/13/19 13:58	05/17/19 19:27	1
Dibromofluoromethane (Surr)	100		70 - 130	05/13/19 13:58	05/17/19 19:27	1
Toluene-d8 (Surr)	104		70 - 130	05/13/19 13:58	05/17/19 19:27	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.76	2.38	mg/Kg	-	05/13/19 13:58	05/16/19 23:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		50 - 150	05/13/19 13:58	05/16/19 23:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.85	2.43	mg/Kg	-	05/17/19 11:15	05/18/19 04:15	1
MRO (C28-C35)	8.32		4.85	2.43	mg/Kg	-	05/17/19 11:15	05/18/19 04:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	125		50 - 150	05/17/19 11:15	05/18/19 04:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.0	7.01	mg/Kg	-		05/15/19 16:42	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB2 @ 0-1' bgs

Lab Sample ID: 490-173838-5

Date Collected: 05/06/19 13:18

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00181	0.000605	mg/Kg	-	05/13/19 13:58	05/17/19 19:57	1
Ethylbenzene	ND		0.00181	0.000605	mg/Kg	-	05/13/19 13:58	05/17/19 19:57	1
Toluene	ND		0.00181	0.000668	mg/Kg	-	05/13/19 13:58	05/17/19 19:57	1
Xylenes, Total	ND		0.00542	0.00111	mg/Kg	-	05/13/19 13:58	05/17/19 19:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 130	05/13/19 13:58	05/17/19 19:57	1
4-Bromofluorobenzene (Surr)	95		70 - 130	05/13/19 13:58	05/17/19 19:57	1
Dibromofluoromethane (Surr)	100		70 - 130	05/13/19 13:58	05/17/19 19:57	1
Toluene-d8 (Surr)	102		70 - 130	05/13/19 13:58	05/17/19 19:57	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	2.68	J	4.84	2.42	mg/Kg	-	05/13/19 13:58	05/16/19 23:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		50 - 150	05/13/19 13:58	05/16/19 23:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.96	2.48	mg/Kg	-	05/17/19 11:15	05/18/19 04:32	1
MRO (C28-C35)	3.87	J	4.96	2.48	mg/Kg	-	05/17/19 11:15	05/18/19 04:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	126		50 - 150	05/17/19 11:15	05/18/19 04:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.1	7.10	mg/Kg	-		05/15/19 16:54	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB2 @ 2' bgs

Lab Sample ID: 490-173838-6

Date Collected: 05/06/19 13:18

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00190	0.000638	mg/Kg	-	05/13/19 13:58	05/17/19 20:27	1
Ethylbenzene	ND		0.00190	0.000638	mg/Kg	-	05/13/19 13:58	05/17/19 20:27	1
Toluene	ND		0.00190	0.000705	mg/Kg	-	05/13/19 13:58	05/17/19 20:27	1
Xylenes, Total	ND		0.00571	0.00117	mg/Kg	-	05/13/19 13:58	05/17/19 20:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 130	05/13/19 13:58	05/17/19 20:27	1
4-Bromofluorobenzene (Surr)	95		70 - 130	05/13/19 13:58	05/17/19 20:27	1
Dibromofluoromethane (Surr)	101		70 - 130	05/13/19 13:58	05/17/19 20:27	1
Toluene-d8 (Surr)	102		70 - 130	05/13/19 13:58	05/17/19 20:27	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	4.15	J	4.74	2.37	mg/Kg	-	05/13/19 13:58	05/17/19 00:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	80		50 - 150	05/13/19 13:58	05/17/19 00:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	6.99		4.92	2.46	mg/Kg	-	05/17/19 11:15	05/18/19 05:25	1
MRO (C28-C35)	13.3		4.92	2.46	mg/Kg	-	05/17/19 11:15	05/18/19 05:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	132		50 - 150	05/17/19 11:15	05/18/19 05:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		9.91	6.93	mg/Kg	-		05/15/19 17:05	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB2 @ 4' bgs

Lab Sample ID: 490-173838-7

Date Collected: 05/06/19 13:18

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00192	0.000642	mg/Kg	-	05/13/19 13:58	05/17/19 20:57	1
Ethylbenzene	ND		0.00192	0.000642	mg/Kg	-	05/13/19 13:58	05/17/19 20:57	1
Toluene	ND		0.00192	0.000709	mg/Kg	-	05/13/19 13:58	05/17/19 20:57	1
Xylenes, Total	ND		0.00575	0.00118	mg/Kg	-	05/13/19 13:58	05/17/19 20:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130	05/13/19 13:58	05/17/19 20:57	1
4-Bromofluorobenzene (Surr)	95		70 - 130	05/13/19 13:58	05/17/19 20:57	1
Dibromofluoromethane (Surr)	102		70 - 130	05/13/19 13:58	05/17/19 20:57	1
Toluene-d8 (Surr)	101		70 - 130	05/13/19 13:58	05/17/19 20:57	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	2.82	J	4.35	2.17	mg/Kg	-	05/13/19 13:58	05/17/19 00:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	89		50 - 150	05/13/19 13:58	05/17/19 00:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.99	2.50	mg/Kg	-	05/17/19 11:15	05/18/19 05:42	1
MRO (C28-C35)	2.83	J	4.99	2.50	mg/Kg	-	05/17/19 11:15	05/18/19 05:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	128		50 - 150	05/17/19 11:15	05/18/19 05:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.1		10.2	7.12	mg/Kg	-		05/15/19 17:17	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB3 @ 5' bgs

Lab Sample ID: 490-173838-8

Date Collected: 05/06/19 14:00

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00199	0.000667	mg/Kg	-	05/13/19 13:58	05/17/19 21:27	1
Ethylbenzene	ND		0.00199	0.000667	mg/Kg	-	05/13/19 13:58	05/17/19 21:27	1
Toluene	ND		0.00199	0.000737	mg/Kg	-	05/13/19 13:58	05/17/19 21:27	1
Xylenes, Total	ND		0.00598	0.00123	mg/Kg	-	05/13/19 13:58	05/17/19 21:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130	05/13/19 13:58	05/17/19 21:27	1
4-Bromofluorobenzene (Surr)	104		70 - 130	05/13/19 13:58	05/17/19 21:27	1
Dibromofluoromethane (Surr)	100		70 - 130	05/13/19 13:58	05/17/19 21:27	1
Toluene-d8 (Surr)	106		70 - 130	05/13/19 13:58	05/17/19 21:27	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	2.23	J	4.43	2.22	mg/Kg	-	05/13/19 13:58	05/17/19 01:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	84		50 - 150	05/13/19 13:58	05/17/19 01:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.85	2.43	mg/Kg	-	05/17/19 11:15	05/18/19 06:00	1
MRO (C28-C35)	8.69		4.85	2.43	mg/Kg	-	05/17/19 11:15	05/18/19 06:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	113		50 - 150	05/17/19 11:15	05/18/19 06:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.43	J	10.1	7.07	mg/Kg	-		05/15/19 17:28	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB3 @ 0-1' bgs

Lab Sample ID: 490-173838-9

Date Collected: 05/06/19 13:47

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00180	0.000604	mg/Kg	-	05/13/19 13:58	05/17/19 21:57	1
Ethylbenzene	ND		0.00180	0.000604	mg/Kg	-	05/13/19 13:58	05/17/19 21:57	1
Toluene	ND		0.00180	0.000667	mg/Kg	-	05/13/19 13:58	05/17/19 21:57	1
Xylenes, Total	ND		0.00541	0.00111	mg/Kg	-	05/13/19 13:58	05/17/19 21:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130	05/13/19 13:58	05/17/19 21:57	1
4-Bromofluorobenzene (Surr)	94		70 - 130	05/13/19 13:58	05/17/19 21:57	1
Dibromofluoromethane (Surr)	103		70 - 130	05/13/19 13:58	05/17/19 21:57	1
Toluene-d8 (Surr)	103		70 - 130	05/13/19 13:58	05/17/19 21:57	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	3.10	J	4.77	2.39	mg/Kg	-	05/13/19 13:58	05/17/19 01:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		50 - 150	05/13/19 13:58	05/17/19 01:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	13.5		4.94	2.47	mg/Kg	-	05/17/19 11:15	05/18/19 06:18	1
MRO (C28-C35)	34.3		4.94	2.47	mg/Kg	-	05/17/19 11:15	05/18/19 06:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	148		50 - 150	05/17/19 11:15	05/18/19 06:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.1	7.06	mg/Kg	-		05/15/19 17:40	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB3 @ 2' bgs

Lab Sample ID: 490-173838-10

Date Collected: 05/06/19 13:47

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00168	0.000561	mg/Kg	-	05/13/19 13:58	05/17/19 22:27	1
Ethylbenzene	ND		0.00168	0.000561	mg/Kg	-	05/13/19 13:58	05/17/19 22:27	1
Toluene	ND		0.00168	0.000620	mg/Kg	-	05/13/19 13:58	05/17/19 22:27	1
Xylenes, Total	ND		0.00503	0.00103	mg/Kg	-	05/13/19 13:58	05/17/19 22:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130	05/13/19 13:58	05/17/19 22:27	1
4-Bromofluorobenzene (Surr)	94		70 - 130	05/13/19 13:58	05/17/19 22:27	1
Dibromofluoromethane (Surr)	102		70 - 130	05/13/19 13:58	05/17/19 22:27	1
Toluene-d8 (Surr)	100		70 - 130	05/13/19 13:58	05/17/19 22:27	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.89	2.45	mg/Kg	-	05/13/19 13:58	05/17/19 02:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		50 - 150	05/13/19 13:58	05/17/19 02:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.99	2.49	mg/Kg	-	05/17/19 11:15	05/18/19 06:35	1
MRO (C28-C35)	6.72		4.99	2.49	mg/Kg	-	05/17/19 11:15	05/18/19 06:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	118		50 - 150	05/17/19 11:15	05/18/19 06:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.0	7.03	mg/Kg	-		05/15/19 17:52	1

Eurofins TestAmerica, Nashville



## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB3 @ 4' bgs

Lab Sample ID: 490-173838-11

Date Collected: 05/06/19 13:47

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00188	0.000631	mg/Kg	-	05/20/19 11:22	05/20/19 13:49	1
Ethylbenzene	ND		0.00188	0.000631	mg/Kg	-	05/20/19 11:22	05/20/19 13:49	1
Toluene	ND		0.00188	0.000697	mg/Kg	-	05/20/19 11:22	05/20/19 13:49	1
Xylenes, Total	ND		0.00565	0.00116	mg/Kg	-	05/20/19 11:22	05/20/19 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130	05/20/19 11:22	05/20/19 13:49	1
4-Bromofluorobenzene (Surr)	88		70 - 130	05/20/19 11:22	05/20/19 13:49	1
Dibromofluoromethane (Surr)	102		70 - 130	05/20/19 11:22	05/20/19 13:49	1
Toluene-d8 (Surr)	104		70 - 130	05/20/19 11:22	05/20/19 13:49	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	2.55	J	4.48	2.24	mg/Kg	-	05/13/19 13:58	05/17/19 03:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	84		50 - 150	05/13/19 13:58	05/17/19 03:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.94	2.47	mg/Kg	-	05/17/19 11:15	05/18/19 06:53	1
MRO (C28-C35)	3.63	J	4.94	2.47	mg/Kg	-	05/17/19 11:15	05/18/19 06:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	131		50 - 150	05/17/19 11:15	05/18/19 06:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.1	7.10	mg/Kg	-		05/15/19 18:26	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB4 @ 0-1' bgs

Lab Sample ID: 490-173838-12

Date Collected: 05/06/19 14:20

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00171	0.000573	mg/Kg	-	05/13/19 13:58	05/18/19 03:26	1
Ethylbenzene	ND		0.00171	0.000573	mg/Kg	-	05/13/19 13:58	05/18/19 03:26	1
Toluene	ND		0.00171	0.000632	mg/Kg	-	05/13/19 13:58	05/18/19 03:26	1
Xylenes, Total	ND		0.00513	0.00105	mg/Kg	-	05/13/19 13:58	05/18/19 03:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 130	05/13/19 13:58	05/18/19 03:26	1
4-Bromofluorobenzene (Surr)	94		70 - 130	05/13/19 13:58	05/18/19 03:26	1
Dibromofluoromethane (Surr)	102		70 - 130	05/13/19 13:58	05/18/19 03:26	1
Toluene-d8 (Surr)	100		70 - 130	05/13/19 13:58	05/18/19 03:26	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	4.28	J	4.86	2.43	mg/Kg	-	05/13/19 13:58	05/17/19 03:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	86		50 - 150	05/13/19 13:58	05/17/19 03:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.94	2.47	mg/Kg	-	05/17/19 11:15	05/18/19 07:10	1
MRO (C28-C35)	4.79	J	4.94	2.47	mg/Kg	-	05/17/19 11:15	05/18/19 07:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	103		50 - 150	05/17/19 11:15	05/18/19 07:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.0	7.01	mg/Kg	-		05/15/19 18:38	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB4 @ 2' bgs

Lab Sample ID: 490-173838-13

Date Collected: 05/06/19 14:20

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00175	0.000585	mg/Kg	-	05/13/19 13:58	05/18/19 03:55	1
Ethylbenzene	ND		0.00175	0.000585	mg/Kg	-	05/13/19 13:58	05/18/19 03:55	1
Toluene	ND		0.00175	0.000646	mg/Kg	-	05/13/19 13:58	05/18/19 03:55	1
Xylenes, Total	ND		0.00524	0.00107	mg/Kg	-	05/13/19 13:58	05/18/19 03:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130	05/13/19 13:58	05/18/19 03:55	1
4-Bromofluorobenzene (Surr)	93		70 - 130	05/13/19 13:58	05/18/19 03:55	1
Dibromofluoromethane (Surr)	100		70 - 130	05/13/19 13:58	05/18/19 03:55	1
Toluene-d8 (Surr)	100		70 - 130	05/13/19 13:58	05/18/19 03:55	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.91	2.46	mg/Kg	-	05/13/19 13:58	05/17/19 04:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	84		50 - 150	05/13/19 13:58	05/17/19 04:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.91	2.45	mg/Kg	-	05/17/19 11:15	05/18/19 07:28	1
MRO (C28-C35)	2.66	J	4.91	2.45	mg/Kg	-	05/17/19 11:15	05/18/19 07:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	104		50 - 150	05/17/19 11:15	05/18/19 07:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12.2		10.2	7.11	mg/Kg	-		05/15/19 18:50	1

Eurofins TestAmerica, Nashville

## Client Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB4 @ 4' bgs

Lab Sample ID: 490-173838-14

Date Collected: 05/06/19 14:20

Matrix: Solid

Date Received: 05/11/19 09:05

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00189	0.000634	mg/Kg	-	05/13/19 13:58	05/18/19 04:25	1
Ethylbenzene	ND		0.00189	0.000634	mg/Kg	-	05/13/19 13:58	05/18/19 04:25	1
Toluene	ND		0.00189	0.000701	mg/Kg	-	05/13/19 13:58	05/18/19 04:25	1
Xylenes, Total	ND		0.00568	0.00116	mg/Kg	-	05/13/19 13:58	05/18/19 04:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130	05/13/19 13:58	05/18/19 04:25	1
4-Bromofluorobenzene (Surr)	93		70 - 130	05/13/19 13:58	05/18/19 04:25	1
Dibromofluoromethane (Surr)	101		70 - 130	05/13/19 13:58	05/18/19 04:25	1
Toluene-d8 (Surr)	101		70 - 130	05/13/19 13:58	05/18/19 04:25	1

## Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	2.82	J	4.48	2.24	mg/Kg	-	05/13/19 13:58	05/17/19 04:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	82		50 - 150	05/13/19 13:58	05/17/19 04:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.00	2.50	mg/Kg	-	05/17/19 11:15	05/18/19 07:46	1
MRO (C28-C35)	3.79	J	5.00	2.50	mg/Kg	-	05/17/19 11:15	05/18/19 07:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	118		50 - 150	05/17/19 11:15	05/18/19 07:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.9		9.94	6.96	mg/Kg	-		05/15/19 19:01	1

Eurofins TestAmerica, Nashville



## QC Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-595788/7

Matrix: Solid

Analysis Batch: 595788

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			05/17/19 13:52	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			05/17/19 13:52	1
Toluene	ND		0.00200	0.000740	mg/Kg			05/17/19 13:52	1
Xylenes, Total	ND		0.00600	0.00123	mg/Kg			05/17/19 13:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		05/17/19 13:52	1
4-Bromofluorobenzene (Surr)	95		70 - 130		05/17/19 13:52	1
Dibromofluoromethane (Surr)	100		70 - 130		05/17/19 13:52	1
Toluene-d8 (Surr)	102		70 - 130		05/17/19 13:52	1

Lab Sample ID: LCS 490-595788/4

Matrix: Solid

Analysis Batch: 595788

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05147		mg/Kg		103	70 - 130
Ethylbenzene	0.0500	0.04597		mg/Kg		92	70 - 130
Toluene	0.0500	0.04742		mg/Kg		95	70 - 130
Xylenes, Total	0.100	0.09338		mg/Kg		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	93		70 - 130
Dibromofluoromethane (Surr)	102		70 - 130
Toluene-d8 (Surr)	98		70 - 130

Lab Sample ID: LCSD 490-595788/5

Matrix: Solid

Analysis Batch: 595788

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05227		mg/Kg		105	70 - 130	2	37
Ethylbenzene	0.0500	0.04950		mg/Kg		99	70 - 130	7	38
Toluene	0.0500	0.05025		mg/Kg		101	70 - 130	6	40
Xylenes, Total	0.100	0.09925		mg/Kg		99	70 - 130	6	38

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	92		70 - 130
Dibromofluoromethane (Surr)	102		70 - 130
Toluene-d8 (Surr)	101		70 - 130

Eurofins TestAmerica, Nashville

## QC Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-595966/7

Matrix: Solid

Analysis Batch: 595966

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			05/18/19 02:56	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			05/18/19 02:56	1
Toluene	ND		0.00200	0.000740	mg/Kg			05/18/19 02:56	1
Xylenes, Total	ND		0.00600	0.00123	mg/Kg			05/18/19 02:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		05/18/19 02:56	1
4-Bromofluorobenzene (Surr)	92		70 - 130		05/18/19 02:56	1
Dibromofluoromethane (Surr)	100		70 - 130		05/18/19 02:56	1
Toluene-d8 (Surr)	101		70 - 130		05/18/19 02:56	1

Lab Sample ID: LCS 490-595966/3

Matrix: Solid

Analysis Batch: 595966

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05084		mg/Kg		102	70 - 130
Ethylbenzene	0.0500	0.04549		mg/Kg		91	70 - 130
Toluene	0.0500	0.04654		mg/Kg		93	70 - 130
Xylenes, Total	0.100	0.09137		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	90		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: LCSD 490-595966/4

Matrix: Solid

Analysis Batch: 595966

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05171		mg/Kg		103	70 - 130	2	37
Ethylbenzene	0.0500	0.04458		mg/Kg		89	70 - 130	2	38
Toluene	0.0500	0.04583		mg/Kg		92	70 - 130	2	40
Xylenes, Total	0.100	0.08835		mg/Kg		88	70 - 130	3	38

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	91		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Eurofins TestAmerica, Nashville

## QC Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-596207/7

Matrix: Solid

Analysis Batch: 596207

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00200	0.000670	mg/Kg			05/20/19 13:18	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			05/20/19 13:18	1
Toluene	ND		0.00200	0.000740	mg/Kg			05/20/19 13:18	1
Xylenes, Total	ND		0.00600	0.00123	mg/Kg			05/20/19 13:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		05/20/19 13:18	1
4-Bromofluorobenzene (Surr)	95		70 - 130		05/20/19 13:18	1
Dibromofluoromethane (Surr)	101		70 - 130		05/20/19 13:18	1
Toluene-d8 (Surr)	101		70 - 130		05/20/19 13:18	1

Lab Sample ID: LCS 490-596207/3

Matrix: Solid

Analysis Batch: 596207

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.05143		mg/Kg		103	70 - 130
Ethylbenzene	0.0500	0.04650		mg/Kg		93	70 - 130
Toluene	0.0500	0.04831		mg/Kg		97	70 - 130
Xylenes, Total	0.100	0.09443		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	92		70 - 130
Dibromofluoromethane (Surr)	101		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 490-596207/4

Matrix: Solid

Analysis Batch: 596207

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05170		mg/Kg		103	70 - 130	1	37
Ethylbenzene	0.0500	0.04637		mg/Kg		93	70 - 130	0	38
Toluene	0.0500	0.04752		mg/Kg		95	70 - 130	2	40
Xylenes, Total	0.100	0.09350		mg/Kg		94	70 - 130	1	38

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	93		70 - 130
Dibromofluoromethane (Surr)	97		70 - 130
Toluene-d8 (Surr)	100		70 - 130

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## QC Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 490-594613/1-A

Matrix: Solid

Analysis Batch: 595596

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 594613

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.00	2.50	mg/Kg		05/13/19 13:30	05/16/19 19:39	1
Gasoline Range Organics [C6 - C10]	ND		5.00	2.50	mg/Kg		05/13/19 13:30	05/16/19 19:39	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	86		50 - 150				05/13/19 13:30	05/16/19 19:39	1
a,a,a-Trifluorotoluene	86		50 - 150				05/13/19 13:30	05/16/19 19:39	1

Lab Sample ID: LCS 490-594613/2-A

Matrix: Solid

Analysis Batch: 595596

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 594613

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics [C6 - C10]	500	474.6		mg/Kg		95	70 - 130
Gasoline Range Organics [C6 - C10]	500	474.6		mg/Kg		95	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene	100		50 - 150				
a,a,a-Trifluorotoluene	100		50 - 150				

Lab Sample ID: LCSD 490-594613/3-A

Matrix: Solid

Analysis Batch: 595596

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 594613

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	500	464.9		mg/Kg		93	70 - 130	2	21
Gasoline Range Organics [C6 - C10]	500	464.9		mg/Kg		93	70 - 130	2	21
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
a,a,a-Trifluorotoluene	99		50 - 150						
a,a,a-Trifluorotoluene	99		50 - 150						

Lab Sample ID: 490-173838-1 MS

Matrix: Solid

Analysis Batch: 595596

Client Sample ID: SB1 @ 0-1' bgs

Prep Type: Total/NA

Prep Batch: 594613

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics [C6 - C10]	ND		436	381.4		mg/Kg		88	56 - 130
Gasoline Range Organics [C6 - C10]	ND		436	381.4		mg/Kg		88	56 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
a,a,a-Trifluorotoluene	97		50 - 150						
a,a,a-Trifluorotoluene	97		50 - 150						

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## QC Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: 490-173838-1 MSD

Matrix: Solid

Analysis Batch: 595596

Client Sample ID: SB1 @ 0-1' bgs

Prep Type: Total/NA

Prep Batch: 594613

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		436	383.2		mg/Kg		88	56 - 130	0	21
Gasoline Range Organics [C6 - C10]	ND		436	383.2		mg/Kg		88	56 - 130	0	21
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
a,a,a-Trifluorotoluene	96		50 - 150								
a,a,a-Trifluorotoluene	96		50 - 150								

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

Lab Sample ID: MB 490-595815/1-A

Matrix: Solid

Analysis Batch: 595817

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 595815

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.00	2.50	mg/Kg		05/17/19 11:15	05/18/19 00:26	1
MRO (C28-C35)	ND		5.00	2.50	mg/Kg		05/17/19 11:15	05/18/19 00:26	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	116		50 - 150				05/17/19 11:15	05/18/19 00:26	1

Lab Sample ID: LCS 490-595815/2-A

Matrix: Solid

Analysis Batch: 595817

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 595815

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	40.0	51.00		mg/Kg		127	54 - 130		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
o-Terphenyl (Surr)	128		50 - 150						

Lab Sample ID: LCSD 490-595815/3-A

Matrix: Solid

Analysis Batch: 595817

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 595815

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	40.0	50.86		mg/Kg		127	54 - 130	0	47
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
o-Terphenyl (Surr)	126		50 - 150						

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## QC Sample Results

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-595081/1-A

Matrix: Solid

Analysis Batch: 595407

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		10.0	7.00	mg/Kg			05/15/19 15:09	1

Lab Sample ID: LCS 490-595081/2-A

Matrix: Solid

Analysis Batch: 595407

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	99.9	102.8		mg/Kg		103	90 - 110

Lab Sample ID: LCSD 490-595081/3-A

Matrix: Solid

Analysis Batch: 595407

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	100.4		mg/Kg		100	90 - 110	2	20

Lab Sample ID: 490-173838-1 MS

Matrix: Solid

Analysis Batch: 595407

Client Sample ID: SB1 @ 0-1' bgs

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		98.9	102.2		mg/Kg		103	80 - 120

Lab Sample ID: 490-173838-1 MSD

Matrix: Solid

Analysis Batch: 595407

Client Sample ID: SB1 @ 0-1' bgs

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		99.5	106.6		mg/Kg		107	80 - 120	4	20

## QC Association Summary

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## GC/MS VOA

## Prep Batch: 594616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-2	SB1 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-3	SB1 @ 4' bgs	Total/NA	Solid	5030B	
490-173838-4	SB1 @ 6' bgs	Total/NA	Solid	5030B	
490-173838-5	SB2 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-6	SB2 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-7	SB2 @ 4' bgs	Total/NA	Solid	5030B	
490-173838-8	SB3 @ 5' bgs	Total/NA	Solid	5030B	
490-173838-9	SB3 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-10	SB3 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-12	SB4 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-13	SB4 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-14	SB4 @ 4' bgs	Total/NA	Solid	5030B	

## Analysis Batch: 595788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Total/NA	Solid	8260B	594616
490-173838-2	SB1 @ 2' bgs	Total/NA	Solid	8260B	594616
490-173838-3	SB1 @ 4' bgs	Total/NA	Solid	8260B	594616
490-173838-4	SB1 @ 6' bgs	Total/NA	Solid	8260B	594616
490-173838-5	SB2 @ 0-1' bgs	Total/NA	Solid	8260B	594616
490-173838-6	SB2 @ 2' bgs	Total/NA	Solid	8260B	594616
490-173838-7	SB2 @ 4' bgs	Total/NA	Solid	8260B	594616
490-173838-8	SB3 @ 5' bgs	Total/NA	Solid	8260B	594616
490-173838-9	SB3 @ 0-1' bgs	Total/NA	Solid	8260B	594616
490-173838-10	SB3 @ 2' bgs	Total/NA	Solid	8260B	594616
MB 490-595788/7	Method Blank	Total/NA	Solid	8260B	
LCS 490-595788/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-595788/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

## Analysis Batch: 595966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-12	SB4 @ 0-1' bgs	Total/NA	Solid	8260B	594616
490-173838-13	SB4 @ 2' bgs	Total/NA	Solid	8260B	594616
490-173838-14	SB4 @ 4' bgs	Total/NA	Solid	8260B	594616
MB 490-595966/7	Method Blank	Total/NA	Solid	8260B	
LCS 490-595966/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-595966/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

## Analysis Batch: 596207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-11	SB3 @ 4' bgs	Total/NA	Solid	8260B	596296
MB 490-596207/7	Method Blank	Total/NA	Solid	8260B	
LCS 490-596207/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-596207/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

## Prep Batch: 596296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-11	SB3 @ 4' bgs	Total/NA	Solid	5030B	

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## QC Association Summary

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## GC VOA

## Prep Batch: 594613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-2	SB1 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-3	SB1 @ 4' bgs	Total/NA	Solid	5030B	
490-173838-4	SB1 @ 6' bgs	Total/NA	Solid	5030B	
490-173838-5	SB2 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-6	SB2 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-7	SB2 @ 4' bgs	Total/NA	Solid	5030B	
490-173838-8	SB3 @ 5' bgs	Total/NA	Solid	5030B	
490-173838-9	SB3 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-10	SB3 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-11	SB3 @ 4' bgs	Total/NA	Solid	5030B	
490-173838-12	SB4 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-13	SB4 @ 2' bgs	Total/NA	Solid	5030B	
490-173838-14	SB4 @ 4' bgs	Total/NA	Solid	5030B	
MB 490-594613/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 490-594613/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 490-594613/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
490-173838-1 MS	SB1 @ 0-1' bgs	Total/NA	Solid	5030B	
490-173838-1 MSD	SB1 @ 0-1' bgs	Total/NA	Solid	5030B	

## Analysis Batch: 595596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 490-594613/1-A	Method Blank	Total/NA	Solid	8015B	594613
LCS 490-594613/2-A	Lab Control Sample	Total/NA	Solid	8015B	594613
LCSD 490-594613/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	594613
490-173838-1 MS	SB1 @ 0-1' bgs	Total/NA	Solid	8015B	594613
490-173838-1 MSD	SB1 @ 0-1' bgs	Total/NA	Solid	8015B	594613

## Analysis Batch: 595597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Total/NA	Solid	8015B	594613
490-173838-2	SB1 @ 2' bgs	Total/NA	Solid	8015B	594613
490-173838-3	SB1 @ 4' bgs	Total/NA	Solid	8015B	594613
490-173838-4	SB1 @ 6' bgs	Total/NA	Solid	8015B	594613
490-173838-5	SB2 @ 0-1' bgs	Total/NA	Solid	8015B	594613
490-173838-6	SB2 @ 2' bgs	Total/NA	Solid	8015B	594613
490-173838-7	SB2 @ 4' bgs	Total/NA	Solid	8015B	594613
490-173838-8	SB3 @ 5' bgs	Total/NA	Solid	8015B	594613
490-173838-9	SB3 @ 0-1' bgs	Total/NA	Solid	8015B	594613
490-173838-10	SB3 @ 2' bgs	Total/NA	Solid	8015B	594613
490-173838-11	SB3 @ 4' bgs	Total/NA	Solid	8015B	594613
490-173838-12	SB4 @ 0-1' bgs	Total/NA	Solid	8015B	594613
490-173838-13	SB4 @ 2' bgs	Total/NA	Solid	8015B	594613
490-173838-14	SB4 @ 4' bgs	Total/NA	Solid	8015B	594613
MB 490-594613/1-A	Method Blank	Total/NA	Solid	8015B	594613
LCS 490-594613/2-A	Lab Control Sample	Total/NA	Solid	8015B	594613
LCSD 490-594613/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	594613
490-173838-1 MS	SB1 @ 0-1' bgs	Total/NA	Solid	8015B	594613
490-173838-1 MSD	SB1 @ 0-1' bgs	Total/NA	Solid	8015B	594613

Eurofins TestAmerica, Nashville

## QC Association Summary

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

## GC Semi VOA

## Prep Batch: 595815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Total/NA	Solid	3550C	
490-173838-2	SB1 @ 2' bgs	Total/NA	Solid	3550C	
490-173838-3	SB1 @ 4' bgs	Total/NA	Solid	3550C	
490-173838-4	SB1 @ 6' bgs	Total/NA	Solid	3550C	
490-173838-5	SB2 @ 0-1' bgs	Total/NA	Solid	3550C	
490-173838-6	SB2 @ 2' bgs	Total/NA	Solid	3550C	
490-173838-7	SB2 @ 4' bgs	Total/NA	Solid	3550C	
490-173838-8	SB3 @ 5' bgs	Total/NA	Solid	3550C	
490-173838-9	SB3 @ 0-1' bgs	Total/NA	Solid	3550C	
490-173838-10	SB3 @ 2' bgs	Total/NA	Solid	3550C	
490-173838-11	SB3 @ 4' bgs	Total/NA	Solid	3550C	
490-173838-12	SB4 @ 0-1' bgs	Total/NA	Solid	3550C	
490-173838-13	SB4 @ 2' bgs	Total/NA	Solid	3550C	
490-173838-14	SB4 @ 4' bgs	Total/NA	Solid	3550C	
MB 490-595815/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 490-595815/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 490-595815/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

## Analysis Batch: 595817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-3	SB1 @ 4' bgs	Total/NA	Solid	8015B	595815
490-173838-4	SB1 @ 6' bgs	Total/NA	Solid	8015B	595815
490-173838-5	SB2 @ 0-1' bgs	Total/NA	Solid	8015B	595815
490-173838-6	SB2 @ 2' bgs	Total/NA	Solid	8015B	595815
490-173838-7	SB2 @ 4' bgs	Total/NA	Solid	8015B	595815
490-173838-8	SB3 @ 5' bgs	Total/NA	Solid	8015B	595815
490-173838-9	SB3 @ 0-1' bgs	Total/NA	Solid	8015B	595815
490-173838-10	SB3 @ 2' bgs	Total/NA	Solid	8015B	595815
490-173838-11	SB3 @ 4' bgs	Total/NA	Solid	8015B	595815
490-173838-12	SB4 @ 0-1' bgs	Total/NA	Solid	8015B	595815
490-173838-13	SB4 @ 2' bgs	Total/NA	Solid	8015B	595815
490-173838-14	SB4 @ 4' bgs	Total/NA	Solid	8015B	595815
MB 490-595815/1-A	Method Blank	Total/NA	Solid	8015B	595815
LCS 490-595815/2-A	Lab Control Sample	Total/NA	Solid	8015B	595815
LCSD 490-595815/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	595815

## Analysis Batch: 596029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Total/NA	Solid	8015B	595815
490-173838-2	SB1 @ 2' bgs	Total/NA	Solid	8015B	595815

## HPLC/IC

## Leach Batch: 595081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Soluble	Solid	DI Leach	
490-173838-2	SB1 @ 2' bgs	Soluble	Solid	DI Leach	
490-173838-3	SB1 @ 4' bgs	Soluble	Solid	DI Leach	
490-173838-4	SB1 @ 6' bgs	Soluble	Solid	DI Leach	
490-173838-5	SB2 @ 0-1' bgs	Soluble	Solid	DI Leach	
490-173838-6	SB2 @ 2' bgs	Soluble	Solid	DI Leach	

Eurofins TestAmerica, Nashville



## QC Association Summary

Client: Sport Environmental Services LLC  
 Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
 SDG: 1RP-3045

## HPLC/IC (Continued)

## Leach Batch: 595081 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-7	SB2 @ 4' bgs	Soluble	Solid	DI Leach	
490-173838-8	SB3 @ 5' bgs	Soluble	Solid	DI Leach	
490-173838-9	SB3 @ 0-1' bgs	Soluble	Solid	DI Leach	
490-173838-10	SB3 @ 2' bgs	Soluble	Solid	DI Leach	
490-173838-11	SB3 @ 4' bgs	Soluble	Solid	DI Leach	
490-173838-12	SB4 @ 0-1' bgs	Soluble	Solid	DI Leach	
490-173838-13	SB4 @ 2' bgs	Soluble	Solid	DI Leach	
490-173838-14	SB4 @ 4' bgs	Soluble	Solid	DI Leach	
MB 490-595081/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-595081/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-595081/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
490-173838-1 MS	SB1 @ 0-1' bgs	Soluble	Solid	DI Leach	
490-173838-1 MSD	SB1 @ 0-1' bgs	Soluble	Solid	DI Leach	

## Analysis Batch: 595407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-173838-1	SB1 @ 0-1' bgs	Soluble	Solid	300.0	595081
490-173838-2	SB1 @ 2' bgs	Soluble	Solid	300.0	595081
490-173838-3	SB1 @ 4' bgs	Soluble	Solid	300.0	595081
490-173838-4	SB1 @ 6' bgs	Soluble	Solid	300.0	595081
490-173838-5	SB2 @ 0-1' bgs	Soluble	Solid	300.0	595081
490-173838-6	SB2 @ 2' bgs	Soluble	Solid	300.0	595081
490-173838-7	SB2 @ 4' bgs	Soluble	Solid	300.0	595081
490-173838-8	SB3 @ 5' bgs	Soluble	Solid	300.0	595081
490-173838-9	SB3 @ 0-1' bgs	Soluble	Solid	300.0	595081
490-173838-10	SB3 @ 2' bgs	Soluble	Solid	300.0	595081
490-173838-11	SB3 @ 4' bgs	Soluble	Solid	300.0	595081
490-173838-12	SB4 @ 0-1' bgs	Soluble	Solid	300.0	595081
490-173838-13	SB4 @ 2' bgs	Soluble	Solid	300.0	595081
490-173838-14	SB4 @ 4' bgs	Soluble	Solid	300.0	595081
MB 490-595081/1-A	Method Blank	Soluble	Solid	300.0	595081
LCS 490-595081/2-A	Lab Control Sample	Soluble	Solid	300.0	595081
LCSD 490-595081/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	595081
490-173838-1 MS	SB1 @ 0-1' bgs	Soluble	Solid	300.0	595081
490-173838-1 MSD	SB1 @ 0-1' bgs	Soluble	Solid	300.0	595081

## Lab Chronicle

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB1 @ 0-1' bgs

Lab Sample ID: 490-173838-1

Date Collected: 05/06/19 12:45

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.21 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 17:57	BBR	TAL NSH
Total/NA	Prep	5030B			5.74 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/16/19 20:13	FKG	TAL NSH
Total/NA	Prep	3550C			25.18 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			596029	05/18/19 12:12	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0115 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 15:44	SW1	TAL NSH

Client Sample ID: SB1 @ 2' bgs

Lab Sample ID: 490-173838-2

Date Collected: 05/06/19 12:45

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.42 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 18:27	BBR	TAL NSH
Total/NA	Prep	5030B			5.56 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/16/19 21:55	FKG	TAL NSH
Total/NA	Prep	3550C			25.66 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			596029	05/18/19 12:30	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0145 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 16:19	SW1	TAL NSH

Client Sample ID: SB1 @ 4 bgs

Lab Sample ID: 490-173838-3

Date Collected: 05/06/19 12:45

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.58 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 18:57	BBR	TAL NSH
Total/NA	Prep	5030B			5.84 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/16/19 22:29	FKG	TAL NSH
Total/NA	Prep	3550C			25.48 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 03:57	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9834 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 16:31	SW1	TAL NSH

Client Sample ID: SB1 @ 6' bgs

Lab Sample ID: 490-173838-4

Date Collected: 05/06/19 13:00

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.43 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 19:27	BBR	TAL NSH

Eurofins TestAmerica, Nashville

## Lab Chronicle

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB1 @ 6' bgs

Lab Sample ID: 490-173838-4

Date Collected: 05/06/19 13:00

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.25 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/16/19 23:03	FKG	TAL NSH
Total/NA	Prep	3550C			25.77 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 04:15	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9951 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 16:42	SW1	TAL NSH

Client Sample ID: SB2 @ 0-1' bgs

Lab Sample ID: 490-173838-5

Date Collected: 05/06/19 13:18

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.54 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 19:57	BBR	TAL NSH
Total/NA	Prep	5030B			5.17 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/16/19 23:37	FKG	TAL NSH
Total/NA	Prep	3550C			25.18 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 04:32	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9595 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 16:54	SW1	TAL NSH

Client Sample ID: SB2 @ 2' bgs

Lab Sample ID: 490-173838-6

Date Collected: 05/06/19 13:18

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.25 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 20:27	BBR	TAL NSH
Total/NA	Prep	5030B			5.27 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 00:11	FKG	TAL NSH
Total/NA	Prep	3550C			25.41 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 05:25	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0285 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 17:05	SW1	TAL NSH

Client Sample ID: SB2 @ 4' bgs

Lab Sample ID: 490-173838-7

Date Collected: 05/06/19 13:18

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.22 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 20:57	BBR	TAL NSH
Total/NA	Prep	5030B			5.75 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 00:45	FKG	TAL NSH

Eurofins TestAmerica, Nashville

## Lab Chronicle

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB2 @ 4' bgs

Lab Sample ID: 490-173838-7

Date Collected: 05/06/19 13:18

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			25.05 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 05:42	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9511 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 17:17	SW1	TAL NSH

Client Sample ID: SB3 @ 5' bgs

Lab Sample ID: 490-173838-8

Date Collected: 05/06/19 14:00

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.02 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 21:27	BBR	TAL NSH
Total/NA	Prep	5030B			5.64 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 01:19	FKG	TAL NSH
Total/NA	Prep	3550C			25.77 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 06:00	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9682 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 17:28	SW1	TAL NSH

Client Sample ID: SB3 @ 0-1' bgs

Lab Sample ID: 490-173838-9

Date Collected: 05/06/19 13:47

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.55 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 21:57	BBR	TAL NSH
Total/NA	Prep	5030B			5.24 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 01:53	FKG	TAL NSH
Total/NA	Prep	3550C			25.28 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 06:18	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9760 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 17:40	SW1	TAL NSH

Client Sample ID: SB3 @ 2' bgs

Lab Sample ID: 490-173838-10

Date Collected: 05/06/19 13:47

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.97 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595788	05/17/19 22:27	BBR	TAL NSH
Total/NA	Prep	5030B			5.11 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 02:27	FKG	TAL NSH
Total/NA	Prep	3550C			25.06 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 06:35	GMH	TAL NSH

Eurofins TestAmerica, Nashville

## Lab Chronicle

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB3 @ 2' bgs

Lab Sample ID: 490-173838-10

Date Collected: 05/06/19 13:47

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.9872 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 17:52	SW1	TAL NSH

Client Sample ID: SB3 @ 4' bgs

Lab Sample ID: 490-173838-11

Date Collected: 05/06/19 13:47

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.31 g	5.0 mL	596296	05/20/19 11:22	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	596207	05/20/19 13:49	BBR	TAL NSH
Total/NA	Prep	5030B			5.58 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 03:01	FKG	TAL NSH
Total/NA	Prep	3550C			25.32 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 06:53	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9595 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 18:26	SW1	TAL NSH

Client Sample ID: SB4 @ 0-1' bgs

Lab Sample ID: 490-173838-12

Date Collected: 05/06/19 14:20

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.85 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595966	05/18/19 03:26	RP	TAL NSH
Total/NA	Prep	5030B			5.14 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 03:35	FKG	TAL NSH
Total/NA	Prep	3550C			25.28 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 07:10	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9971 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 18:38	SW1	TAL NSH

Client Sample ID: SB4 @ 2' bgs

Lab Sample ID: 490-173838-13

Date Collected: 05/06/19 14:20

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.73 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595966	05/18/19 03:55	RP	TAL NSH
Total/NA	Prep	5030B			5.09 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 04:09	FKG	TAL NSH
Total/NA	Prep	3550C			25.46 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 07:28	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9537 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 18:50	SW1	TAL NSH

Eurofins TestAmerica, Nashville



## Lab Chronicle

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Client Sample ID: SB4 @ 4' bgs

Lab Sample ID: 490-173838-14

Date Collected: 05/06/19 14:20

Matrix: Solid

Date Received: 05/11/19 09:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.28 g	5.0 mL	594616	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	595966	05/18/19 04:25	RP	TAL NSH
Total/NA	Prep	5030B			5.58 g	5.0 mL	594613	05/13/19 13:58	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	595597	05/17/19 04:43	FKG	TAL NSH
Total/NA	Prep	3550C			25.01 g	1 mL	595815	05/17/19 11:15	KWS	TAL NSH
Total/NA	Analysis	8015B		1			595817	05/18/19 07:46	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0190 g	30 mL	595081	05/15/19 07:52	JHS	TAL NSH
Soluble	Analysis	300.0		1			595407	05/15/19 19:01	SW1	TAL NSH

## Laboratory References:

TAL NSH = Eurofins TestAmerica, Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

## Method Summary

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8015B	Gasoline Range Organics - (GC)	SW846	TAL NSH
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL NSH
300.0	Anions, Ion Chromatography	MCAWW	TAL NSH
3550C	Ultrasonic Extraction	SW846	TAL NSH
5030B	Purge and Trap	SW846	TAL NSH
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL NSH

**Protocol References:**

ASTM = ASTM International

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL NSH = Eurofins TestAmerica, Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

## Accreditation/Certification Summary

Client: Sport Environmental Services LLC  
Project/Site: Hardison Spill Site Delineation

Job ID: 490-173838-1  
SDG: 1RP-3045

### Laboratory: Eurofins TestAmerica, Nashville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-19
Arizona	State Program	9	AZ0473	05-05-20
Arkansas DEQ	State Program	6	88-0737	04-25-20
California	State Program	9	2938	06-30-19
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-19
Iowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-19
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-19
Louisiana	NELAP	6	30613	06-30-19
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-20
Massachusetts	State Program	1	M-TN032	06-30-19
Minnesota	NELAP	5	047-999-345	12-31-19
Mississippi	State Program	4	N/A	06-30-19
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-19
New Jersey	NELAP	2	TN965	06-30-19
New York	NELAP	2	11342	03-31-20
North Carolina (WW/SW)	State Program	4	387	12-31-19
North Dakota	State Program	8	R-146	06-30-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-19 *
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-19
South Carolina	State Program	4	84009 (001)	02-28-19 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	04-10-20
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-20
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Nashville

**TestAmerica**THE LEADER IN ENVIRONMENTAL TESTING  
Nashville, TN**COOLER RECEIPT FORM**

490-173838 Chain of Custody

Cooler Received/Opened On 05-11-2019 @ 09:05Time Samples Removed From Cooler 16:23 Time Samples Placed In Storage 16:29 (2 Hour Window)1. Tracking # 6753 (last 4 digits, FedEx) Courier: FedExIR Gun ID 14740456 pH Strip Lot MA Chlorine Strip Lot MA2. Temperature of rep. sample or temp blank when opened: 5.3 Degrees Celsius3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA4. Were custody seals on outside of cooler? YES...NO...NAIf yes, how many and where: 1 (front)5. Were the seals intact, signed, and dated correctly? YES...NO...NA6. Were custody papers inside cooler? YES...NO...NAI certify that I opened the cooler and answered questions 1-6 (initial)7. Were custody seals on containers: YES NO and Intact YES...NO...NAWere these signed and dated correctly? YES...NO...NA8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None10. Did all containers arrive in good condition (unbroken)? YES...NO...NA11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA12. Did all container labels and tags agree with custody papers? YES...NO...NA13a. Were VOA vials received? YES...NO...NAb. Was there any observable headspace present in any VOA vial? YES...NO...NA

Larger than this.

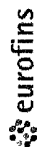
14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # \_\_\_\_\_I certify that I unloaded the cooler and answered questions 7-14 (initial) ACE15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NAb. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA16. Was residual chlorine present? YES...NO...NAI certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) ACE17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA18. Did you sign the custody papers in the appropriate place? YES...NO...NA19. Were correct containers used for the analysis requested? YES...NO...NA20. Was sufficient amount of sample sent in each container? YES...NO...NAI certify that I entered this project into LIMS and answered questions 17-20 (initial) ACEI certify that I attached a label with the unique LIMS number to each container (initial) ACE21. Were there Non-Conformance issues at login? YES...NO... Was a NCM generated? YES...NO...# \_\_\_\_\_

# Midland

## Chain of Custody Record #264

Eurofins TestAmerica, Nashville  
2960 Foster Creighton Drive

Nashville, TN 37204-3719  
phone 615.726.0177 fax 615.726.3404



Environment Testing  
TestAmerica

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Project Manager: Debi Moore Email: debi@sporenv.com; cianna@sporenv.com Tel/Fax: (432) 683-1100		Site Contact: Debi Moore Lab Contact: Jennifer Gambill		Date: 05/09/2019 5-6-19 Carrier:		COC No: 1 of 2 COCs Sampler: Clint Elliott	
Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input checked="" type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Perform MS / MSD (Y / N)		Walk-in Client:		For Lab Use Only:	
Project Name: Hardison Spill Site Decontamination (TRP-3045)		Filtered Sample (Y / N)		Lab Sampling:		Job / SDG No.:	
Site: PO #		Sample Identification		Sample Type (C-Comp, G-Grab)		Matrix	
Sample Date		NM Sample Time		# of Cont.			
SB1 @ 0-1' bgs		5-6-19 1245		6		Soil	
SB1 @ 2' bgs		5-6-19 1245		6		"	
SB1 @ 4' bgs		5-6-19 1245		6		"	
SB1 @ 6' bgs		5-6-19 1300		6		"	
SB2 @ 0-1' bgs		5-6-19 1318		6		"	
SB2 @ 2' bgs		5-6-19 1318		6		"	
SB2 @ 4' bgs		5-6-19 1318		6		"	
SB2 @ 5' bgs		5-6-19 1400		6		"	
SB3 @ 0-1' bgs		" 1347		6		"	
SB3 @ 2' bgs		" 1347		6		"	
SB3 @ 4' bgs		" 1347		6		"	
Preservation Used: 1=Ice 2=HCl 3=H2SO4 4=HNO3 5=NaOH 6=Other		Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for Months					
Special Instructions/QC Requirements & Comments:		Cooler Temp. (°C): 5.3° Corrid:		Therm ID No.:			
Custody Seal Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Received by: Debi S. Moore		Company: Sport Env.		Date/Time: 5-6-19 1800	
Relinquished by: Clint Elliott		Received by: Debi S. Moore		Company: Sport Env.		Date/Time: 5-9-19 1510	
Relinquished by: Debi S. Moore		Received by: Debi S. Moore		Company: Sport Env.		Date/Time: 5-10-19 0845	

Form No. CA-C-WI-002, Rev. 4.23, dated 4/16/2019





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

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

CONDITIONS  
  
Action 196457

CONDITIONS

Operator: Empire New Mexico LLC 2200 S. Utica Place Tulsa, OK 74114	OGRID: 330679
	Action Number: 196457
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	3/13/2023