JUNE 13, 2019

V0RAW-191112-C-1410

SITE CHARACTERIZATION REPORT AND REMEDIATION DEFERRAL REQUEST

LONGFELLOW ENERGY, LP – STATE 20B BATTERY

2RP-5158

Prepared for: Longfellow Energy, LP

Prepared by: Sport Environmental Services, LLC

502 N. Big Spring St.

Midland, TX 79701

www.sportenv.com

June 13, 2019

Mr. Mike Bratcher
New Mexico Oil Conservation Division
District 2 (Artesia)
811 S. First St.
Artesia, NM 88210

Re: Site Characterization Report and Remediation Deferral Request
Longfellow Energy, L.P.
State 20B Battery
RP #: 1RP-5158
Approximate Geographic Coordinates: 32.824229°N, -104.089222 °W
Unit Letter A, Section 20, Township 17S, Range 29E
Eddy County, New Mexico

Mr. Bratcher:

Sport Environmental Services, LLC is submitting, on behalf of Longfellow Energy, L.P. *(Longfellow* or *Client)*, a Site Characterization Report and Remediation Deferral Request for the State 20B Battery *(State 20B* or *subject site)* where a release occurred as a result of a lightning strike which caused a pump failure. A request for remediation deferral is being made due to contamination presence in areas immediately under or around production equipment where remediation could cause a major facility deconstruction. The areas outside of secondary containment were protected by the earthen berm as demonstrated by the photographs and imagery that accompany this report as well as by confirmation soil sampling. Longfellow has performed initial remedial activities within the containment area that was impacted by the release of produced water (with an oil skim) which occurred on November 5, 2018. Upon discovery of the release, efforts were made to stop the release at its source, the free liquid was removed and properly disposed of, and an inspection of the release site confirmed that the secondary containment effectively prevented the release from impacting areas outside of the berm. The Initial C-141 Form and the C-141 Form containing he Deferral Request related to this release is available in **Attachment A**.

Site Assessment & Characterization

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 surface water 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 1.5-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, but revealed a well drilled in November 2012 with a depth to water of 76 feet located approximately 1.3 miles from the subject site. 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 76 feet below ground surface ('bgs). Therefore, the appropriate remediation standard specified in the NMOCD Table 1 (NMAC 19.15.29.11) will be applied.

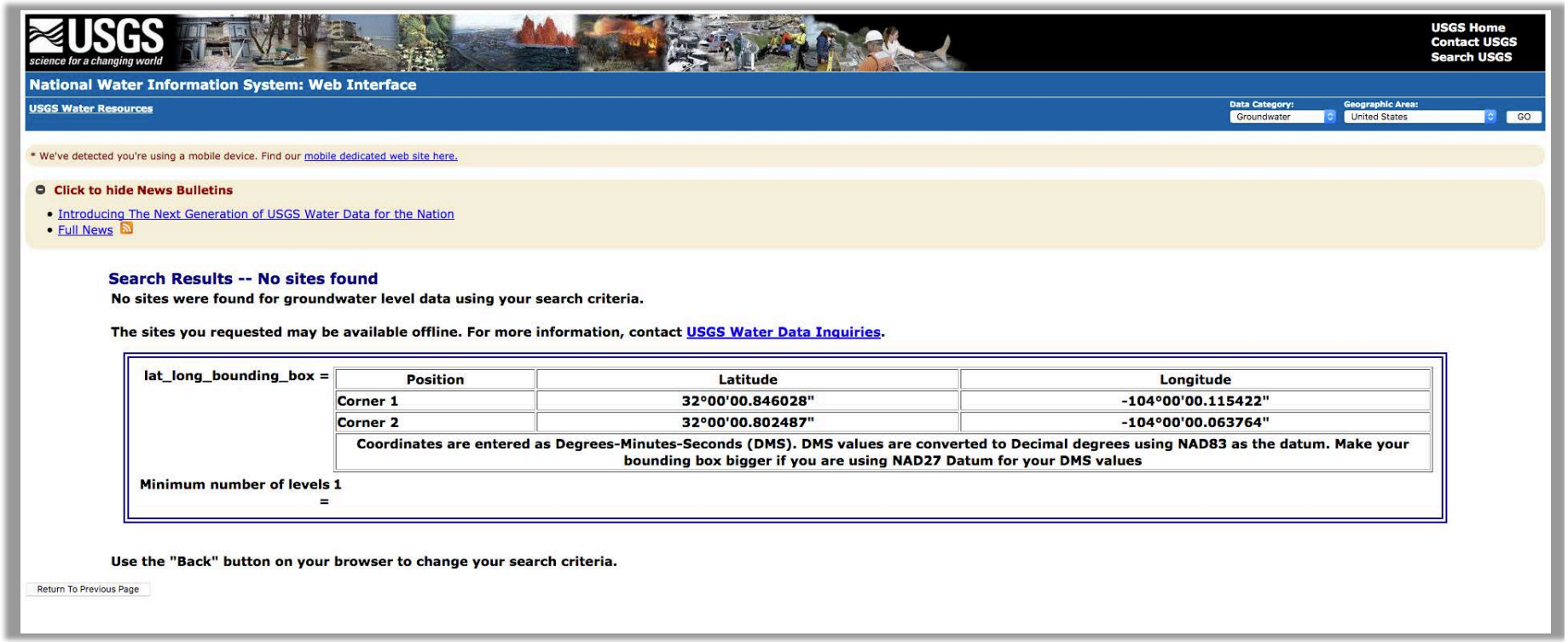
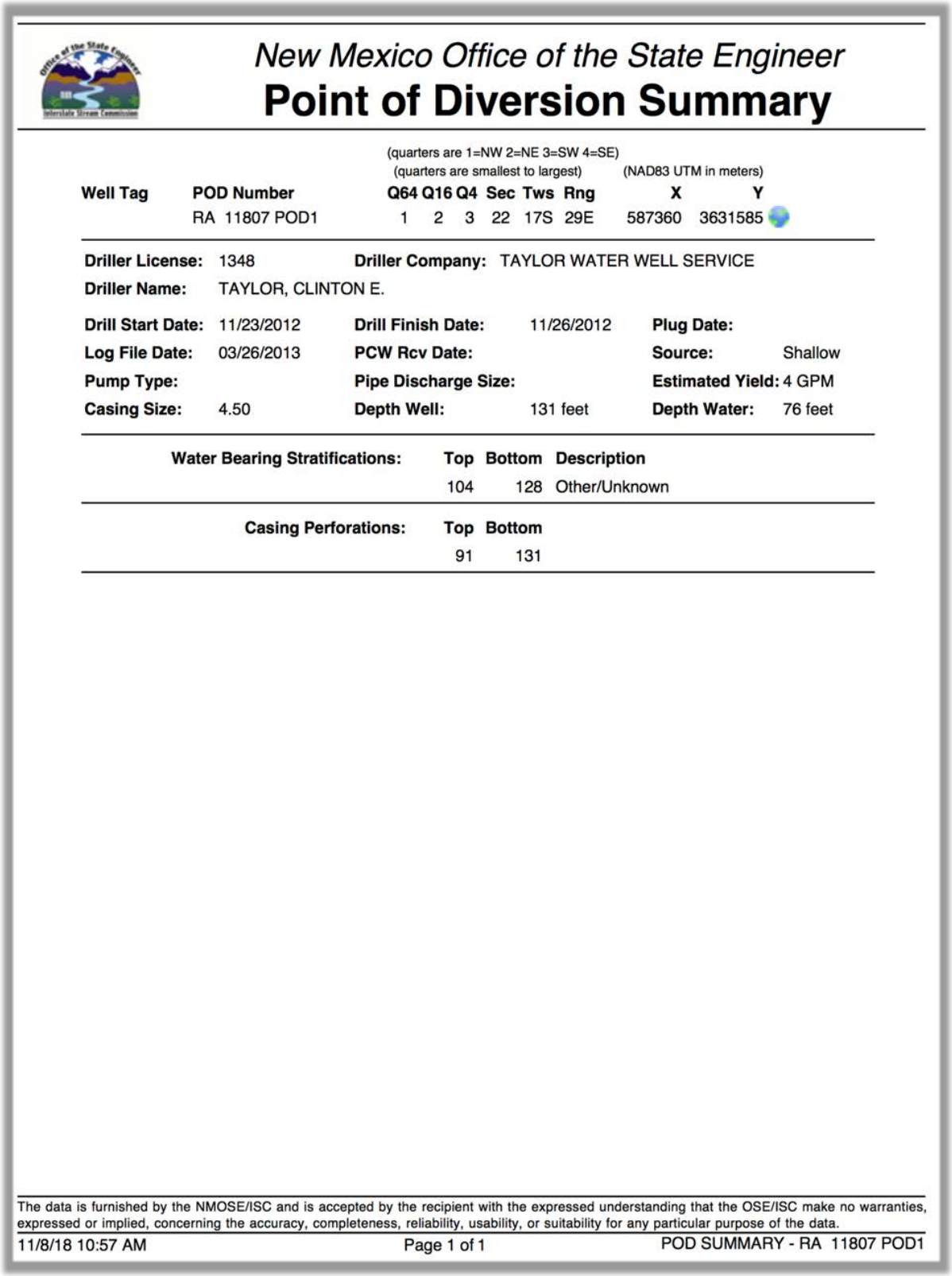


Figure 1. *USGS National Water Information System – No results within 1.5-miles of subject site*



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
	RA 11807 POD1	1	2	3	22	17S	29E	587360	3631585

Driller License:	1348	**Driller Company:**	TAYLOR WATER WELL SERVICE		
Driller Name:	TAYLOR, CLINTON E.				
Drill Start Date:	11/23/2012	**Drill Finish Date:**	11/26/2012	**Plug Date:**	
Log File Date:	03/26/2013	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	4 GPM
Casing Size:	4.50	**Depth Well:**	131 feet	**Depth Water:**	76 feet

Water Bearing Stratifications:	Top	Bottom	Description
	104	128	Other/Unknown

Casing Perforations:	Top	Bottom
	91	131

Figure 2. *NMOSE Query Results (Groundwater at 76'bgs*

Given a groundwater depth of approximately 76'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))

Closure Criteria for Soils Impacted by a Release: Minimum depth below any point within the horizontal boundary of the release to groundwater is between 51-100 feet	
Constituent	***Limit (mg/Kg)***
Chloride	10,000
TPH (Total Petroleum Hydrocarbons) (GRO+DRO+MRO)	2,500
GRO+DRO (Gasoline Range Organics and Diesel Range Organics)	1,000
BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes)	50
Benzene	10

Site characterization by means of horizontal and vertical delineation sampling was performed. The release footprint (approximately 3,958 ft^2) was limited to the containment area and mapped with a GPS device to generate a Release Site Plan denoting sample location placement as shown in **Attachment C.**

Soil Sampling Protocol and Scope

On February 20, 2019, discrete depth samples were collected utilizing a truck-mounted Geoprobe 540UD direct push unit outside of the fenced facility, and hand-augering was performed inside the active facility, as required. Soil samples were also collected approximately one month earlier on January 17, 2019, but were lost by FedEx while in transit to the analytical laboratory – Sport Environmental appreciates NMOCD's understanding with regard to granting an extension for completion of sampling and report generation on account of the delays associated these external factors. During the second round of soil sampling, soil samples were collected at the surface (0-1' bgs) and in one- to two-foot depth increments up to the maximum depth (8' bgs) depending on the ultimate depth of the borehole for soils characterization and assessment. Sample locations were selected to be representative of the affected area and to provide appropriate horizontal delineation – the exact location of each sample point was also determined by safety concerns regarding the position of subsurface lines and flowlines in the vicinity of the subject site. The depth of each sample point was ultimately determined by the point at which auger refusal was encountered.

Soil at the subject site was homogeneous outside the containment area did not show visual or olfactory evidence of impact. The area outside of secondary containment was a caliche well pad and the area inside of secondary containment was also caliche which could not be penetrated beyond a depth of 3.5'bgs. For this reason, soil lithology data *(i.e.*, boring logs) were not generated since caliche overburden could not be not fully penetrated to enter native soils. A boring log for the soil borehole location where the greatest depth (i.e., 8'bgs at SB3) was prepared for inclusion in this report to show conditions at the site. A boring log for SB5 has also been prepared to show the conditions within the bermed area where concentrations of TPH and Chlorides were highest, but limited due to the presence of caliche. These boring logs are available in **Attachment D**. Due to the presence of caliche and underground piping in the affected bermed area, full vertical delineation was not possible. However, the client's rapid response to the release appears to have effectively limited impacts to the top four feet of caliche utilized on the well pad. Please see **Attachment E** for the run ticket confirming proper disposal of free liquids.

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 were limited to the area within secondary containment (i.e., only the soil within the berm was affected). A summary of results is available in the table below and full analytical results, inclusive of the chain-of-custody, are provided in **Attachment F.**

Table 2. Soil Sampling Results (February 20, 2019 Confirmation Sampling)

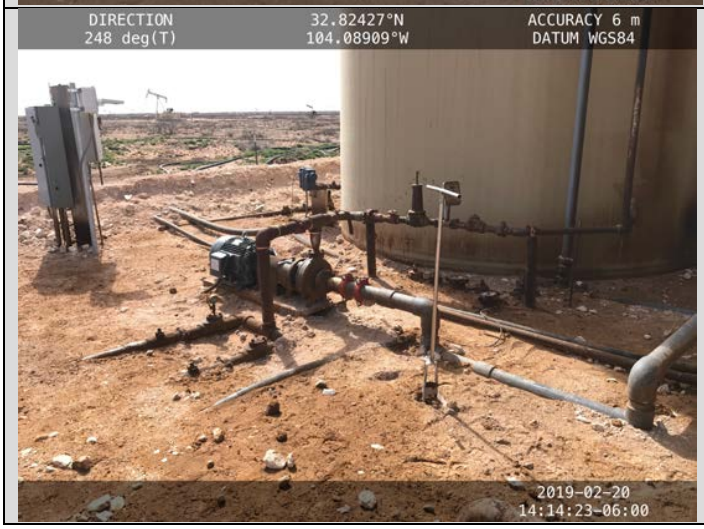
Analyte	Benzene	Toluene	Ethylbenzene	Xylenes, Total	Gasoline Range Organics [C6 - C10]	Diesel Range Organics [C10-C28]	MRO (C28-C35)	Chloride
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
NMOCD Closure Criteria for Soils Impacted By a Release (Groundwater between 51 and 100' from maximum depth of contamination)	10	50	50	50	1,000	1,000	1,000	10,000
490-169021-1 SB1-001 @ 0-1'bgs 2/20/2019 11:36 AM	ND	0.000761	ND	ND	ND	184	198	702
490-169021-2 SB1-001 @ 1-2'bgs 2/20/2019 11:36 AM	ND	0.00101	ND	ND	ND	360	343	687
490-169021-3 SB1-001 @ 2-3'bgs 2/20/2019 11:36 AM	ND	ND	ND	ND	ND	ND	ND	234
490-169021-4 SB1-001 @ 5-6'bgs 2/20/2019 11:54 AM	ND	ND	ND	ND	ND	ND	ND	2,530
490-169021-5 SB2-001 @ 0-1'bgs 2/20/2019 12:15 PM	ND	ND	ND	ND	ND	205	203	831
490-169021-6 SB2-001 @ 1-2'bgs 2/20/2019 12:15 PM	ND	ND	ND	ND	ND	ND	3.16	348
490-169021-7 SB2-001 @ 2-3'bgs 2/20/2019 12:15 PM	ND	ND	ND	ND	ND	ND	3.08	341
490-169021-8 SB3-001 @ 0-1'bgs 2/20/2019 12:31 PM	ND	ND	ND	ND	ND	ND	3.99	13.0
490-169021-9 SB3-001 @ 1-2'bgs 2/20/2019 12:31 PM	ND	ND	ND	ND	ND	2.64	4.45	46.6
490-169021-10 SB3-001 @ 2-3'bgs 2/20/2019 12:31 PM	ND	ND	ND	ND	ND	ND	2.91	475
490-169021-11 SB3-001 @ 5-6'bgs 2/20/2019 12:43 PM	ND	ND	ND	ND	ND	ND	ND	32.2
490-169021-12 SB3-001 @ 7-8'bgs 2/20/2019 12:43 PM	ND	ND	ND	ND	ND	ND	ND	50.7
490-169021-13 SB4-001 @ 1'bgs 2/20/2019 12:56 PM	ND	0.00221	0.00689	0.0117	ND	380	262	1,130
490-169021-14 SB4-001 @ 2'bgs 2/20/2019 12:59 PM	ND	0.00136	0.00929	0.0124	ND	278	151	3,780
490-169021-15 SB4-001 @ 3'bgs 2/20/2019 1:05 PM	ND	0.167	12.1	18.8	264	1,590	463	1,030
490-169021-16 SB4-001 @ 3.5'bgs 2/20/2019 1:11 PM	ND	0.203	16.8	23.0	400	2,840	615	1,380
490-169021-17 SB5-001 @ 1'bgs 2/20/2019 1:16 PM	0.0236	2.31	5.49	13.3	220	1,910	805	11,500
490-169021-18 SB5-001 @ 1.5'bgs 2/20/2019 1:20 PM	0.0321	4.67	9.25	19.6	274	3,200	1,110	11,100

Note: The Total Petroleum Hydrocarbons (TPH) Limit for the 51-100' Groundwater scenario is 2,500 mg/kg inclusive of GRO, DRO, and MRO. The limit for combined GRO and DRO is 1,000 mg/kg.

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: November 12, 2018 and February 20, 2019

Photograph	Description
	The subject site is visible and free liquids have been removed. Since hand-augering was the only means of sampling allowed within the facility, due to safety concerns and the presence of the berm, auger refusal occurred at shallow depths where caliche was present on the well pad. The caliche appears to have limited infiltration of the produced water and mitigated impacts of this release.
	Soil boring within the containment at subject site. Photograph shows that free liquids have been removed and that fresh soil has been added to the site. The berm, which limited impacts to the area inside secondary containment, is visible in the background. The buried pipes and hard caliche surface limit the depth of contamination and make further vertical delineation infeasible at this active facility.

Area Outside of Active Facility is Unaffected by the Release

Based on the analytical data provided herein, the concentrations of all constituents (i.e., Chlorides, TPH, Benzene, Toluene, Ethylbenzene, and Xylenes) at the area outside of the active facility (i.e., the area outside of secondary containment) were below their respective limits as confirmed by the analytical data provided herein.

Request for Deferral of Remedial Work Within Secondary Containment

A review of the analytical results associated with characterization efforts was performed. The results indicate that a relatively small volume of soil at Soil Boring 4 (SB4) and Soil Boring 5 (SB5) exceeded the Total Petroleum Hydrocarbon (TPH) and Chloride limit applicable to the subject site. Since this soil boring location is within of the active facility fence and would be subject to deferral, Sport Environmental, on behalf of Longfellow Energy requests that deferral be granted until the time of site closure. The volume of affected soil associated with the deferred remediation request is estimated to be 440 cubic yards as estimated by multiplying the footprint of the entire area within the berm by three feet in depth. Based on a review of this information, the affected soil does not appear likely to cause an imminent risk to human health, the environment, or groundwater.

Sport Environmental respectfully requests remediation deferral of this release within the active facility on behalf of Longfellow Energy, LP.

Thank you again for granting an extension in sampling and reporting due to weather, equipment availability issues, and sample transit logistics. If NMOCD have any further questions or comments regarding this request for closure, please contact us at (432) 683-1100.

Sincerely,

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

cc: Mr. David Cain and Mr. Monte Bell (Longfellow Energy, LP)

List of Attachments:

A *NMOCD Form C-141 (Deferral Request and Initial)*
B *0.5-Mile Radius Map Denoting Absence of Major Watercourses*
C *Release Site Plan Denoting Sample Locations*
D *Run Ticket*
E *Boring Logs*
F *Full Analytical Results and Chain-of-Custody*

Attachment A

NMOCD Form C-141 (Deferral Request and Initial)

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 Longfellow Energy, LP	OGRID 372210
Contact Name David Cain, Engineering Technologist & Regulatory Specialist	Contact Telephone (214) 265-4715
Contact email david.cain@longfellowenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 16803 Dallas Pkwy, Addison, TX 75001	

Location of Release Source

Latitude 32.824229°N Longitude -104.089222°W

(NAD 83 in decimal degrees to 5 decimal places)

Site Name State 20B Battery	Site Type Battery
Date Release Discovered November 5, 2018	API# *(if applicable)* 30-015-30918

Unit Letter	Section	Township	Range	County
A	20	17S	29E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 480 bbl	Volume Recovered (bbls) 480 bbl
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No (see attached laboratory report)
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Lightning strike caused pump failure resulting in the release.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Although the released fluids were immediately recovered, the initial release volume was > 200 bbl of produced water.

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

Yes, immediate notification was given by David Cain, a Longfellow representative, via telephone to Mike Bratcher at the OCD District 2 office.

Initial Response

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

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

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

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

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

Printed Name: David Cain Title: Engineering Technologist & Regulatory Specialist

Signature: David Cain Date: 11-16-2018

email: david.cain@longfellowenergy.com Telephone: (214) 265-4715

OCD Only

Received by: Date:

Form C-141
Page 3

State of New Mexico
Oil Conservation Division

Incident ID	
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Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	76 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

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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: DAVID CAIN Title: ENGINEERING TECHNOLOGIST + REGULATORY SPECIALIST

Signature: David Cain Date: 6-18-19

email: david.cain@longfellowenergy.com Telephone: 214-265-4715

OCD Only

Received by: _____ Date: _____

Form C-141
Page 5

State of New Mexico
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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.

Note: Full vertical delineation was not possible due to hard caliche within the secondary containment berm. No impact to areas outside the berm or well pad were present as confirmed with full horizontal delineation.

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: DAVID CAIN Title: ENGINEERING TECHNOLOGIST + REGULATORY SPECIALIST

Signature: David Cain Date: 6-18-19

email: david.cain@longfellowenergy.com Telephone: 214-265-4715

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
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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)

☐ 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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

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: _____ Date: _____

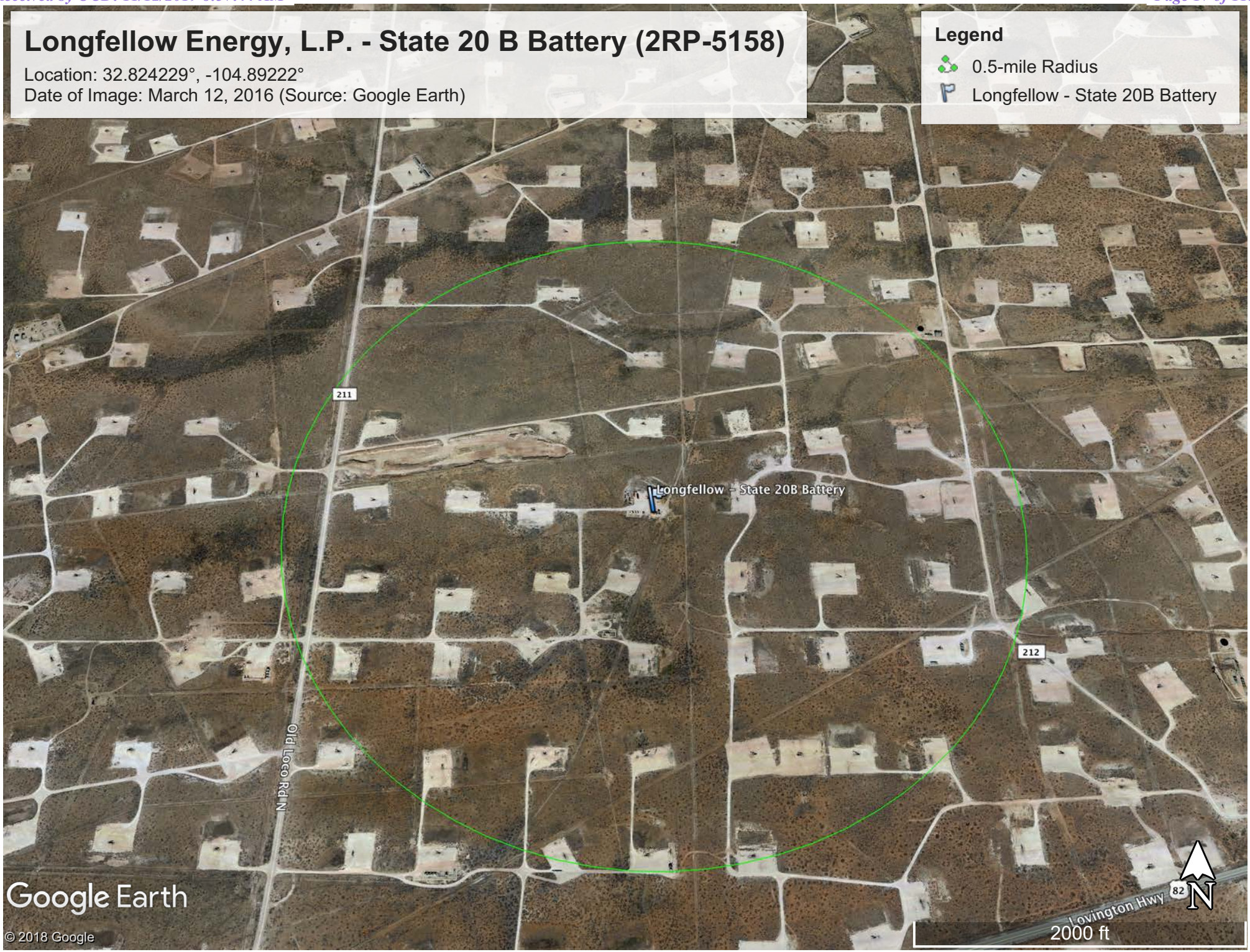
Printed Name: _____ Title: _____

Attachment B

0.5-Mile Radius Map
Demonstrating Absence of Major Watercourses

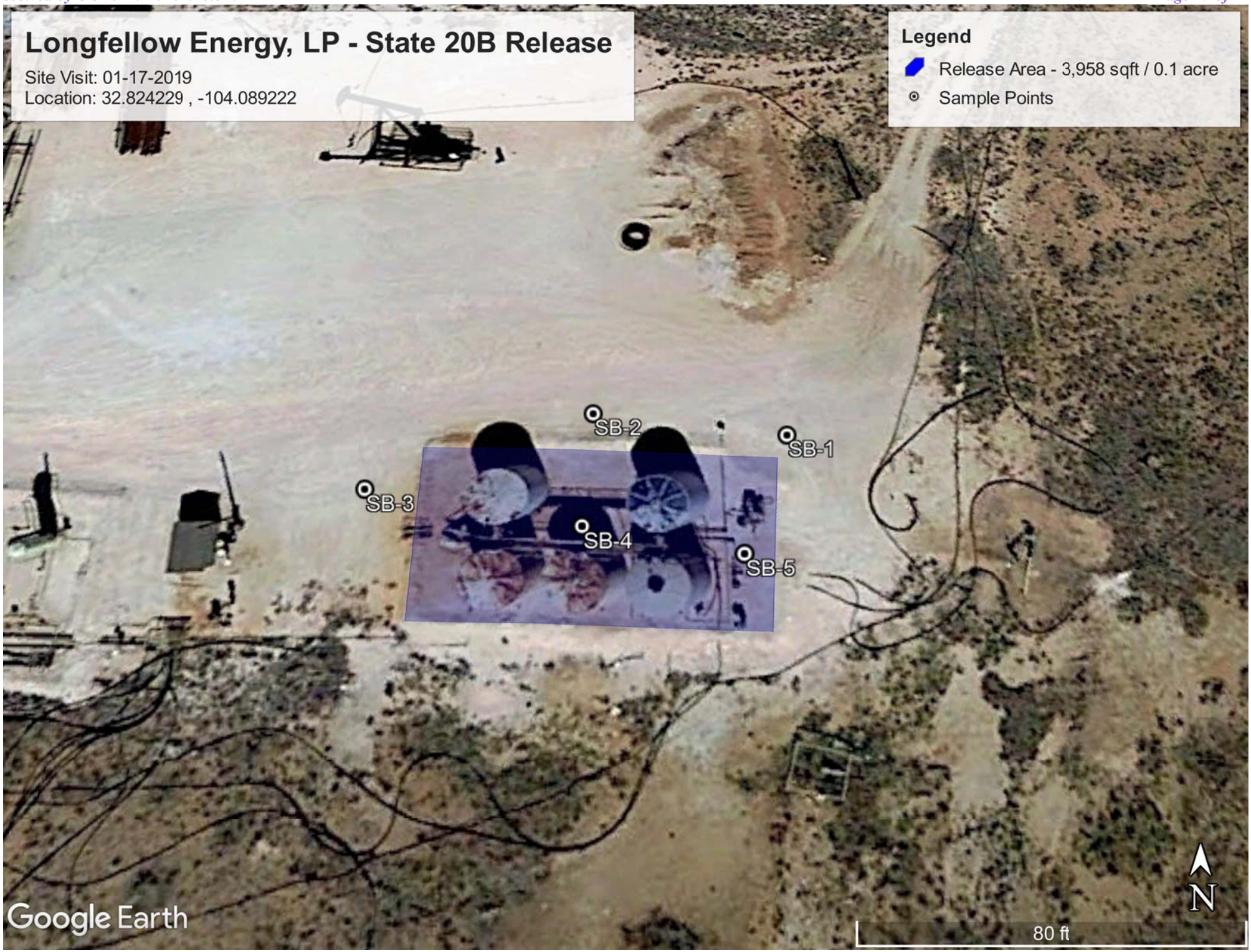
Longfellow Energy, L.P. - State 20 B Battery (2RP-5158)

Location: 32.824229°, -104.89222°
Date of Image: March 12, 2016 (Source: Google Earth)



Attachment C

Release Site Plan
Depicting Sample Locations


Longfellow Energy, LP - State 20B Release
Site Visit: 01-17-2019
Location: 32.824229 , -104.089222
Legend
Release Area - 3,958 sqft / 0.1 acre
Sample Points
SB-1
SB-2
SB-3
SB-4
SB-5
N
80 ft
Google Earth

Attachment D

Boring Logs

BORING AND WELL LOG LEGEND

LITHOLOGY	WATER LEVEL	WELL/BORING COMPLETION	Sample Type	DESCRIPTION
				ASPHALT
				CONCRETE
				BEDROCK
				IGNEOUS Rock
				METAMORPHIC Rock
				SEDIMENTARY Rock
				Well-graded GRAVEL (GW)
				Poorly graded GRAVEL (GP)
				Silty GRAVEL (GM)
				Clayey GRAVEL (GC)
				Well-graded GRAVEL with silt (GW-GM)
				Poorly graded GRAVEL with silt (GP-GM)
				Well-graded GRAVEL with clay (GW-GC)
				Poorly graded GRAVEL with clay (GP-GC)
				Well-graded SAND (SW)
				Poorly graded SAND (SP)
				Silty SAND (SM)
				Clayey SAND (SC)
				Well-graded SAND with silt (SW-SM)
				Poorly graded SAND with silt (SP-SM)
				Well-graded SAND with clay (SW-SC)
				Poorly graded SAND with clay (SP-SC)
				SILT (ML)
				Lean CLAY (CL)
				Organic SOIL (OL)
				Elastic SILT (MH)
				Fat CLAY (CH)
				Organic SOIL (OH)
				Organic SOIL (OL/OH)
				PEAT (PT)
				Volume Descriptors:
				Trace = <5%
				Few = 5-10%
				Little = 15-25%
				Some = 30-45%
				Mostly = >=50%
	▽			Water Level During Drilling
	▼			Water Level at End of Drilling/in Completed Well
				Cap
				Riser
				Screen
				End Plug
				Annular Seal (Bentonite-Cement Grout, Bentonite Slurry/Chips/Pellets/Powder, Other)
				Sanitary Seal (Bentonite Slurry/Chips/Pellets/Powder, Other)
				Filter Pack (Sand, Gravel, Other)
				Backfill
			GR	Grab
			EN	Encore
			SS	Split Spoon
			SH	Shelby Tube
			CO	Core Barrel
			DP	Direct Push
			ID	Lab Sample and ID

NOTES:

	Client: Longfellow Energy, LP	**BORING LOG**
	Project: State 20B Battery	**Boring No.** SB3-001
	Address: 502 N. Big Spring St., Midland, TX	**Page:** 1 of 1

Drilling Start Date:	**02/20/2019 12:20**	Boring Depth (ft):	**8.0**
Drilling End Date:	**02/20/2019 12:43**	Boring Diameter (in):	**2.00**
Drilling Company:	**Sport Environmental Services**	Sampling Method(s):	
Drilling Method:	**Direct Push**	DTW During Drilling (ft):	**N/A**
Drilling Equipment:	**Geoprobe 540UD**	DTW After Drilling (ft):	**N/A**
Driller:	**Clint Elliott**	Ground Surface Elev. (ft):	**3,806.00**
Logged By:	**Cianna Logie**	Location (Lat, Long):	**32.82427, -104.089415**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0								(0') Lean CLAY with sand (CL); trace fine gravel, few fine-medium sand, few silt, mostly clay, medium plasticity, medium stiff, moist, 10YR(3/3) dark brown, no odor; strong hydrochloric acid reaction; trace presence of very fine roots; mix of existing caliche and some sand.			0
								(3') Fat CLAY (CH); trace fine gravel, few fine-medium sand, mostly clay, high plasticity, hard, dry, 10YR (7/3) very pale brown, strong hydrochloric acid reaction; no organic matter; no odor; caliche.			
5											5
								(8') Boring terminated			
10											10

NOTES:

	Client: Longfellow Energy, LP	**BORING LOG**
	Project: State 20B Battery	**Boring No.** SB5-001
	Address: 502 N. Big Spring St., Midland, TX	**Page:** 1 of 1

Drilling Start Date:	**02/20/2019 13:12**	Boring Depth (ft):	**1.5**
Drilling End Date:	**02/20/2019 13:20**	Boring Diameter (in):	**4.00**
Drilling Company:	**Sport Environmental Services**	Sampling Method(s):	
Drilling Method:	**Hollow Stem Auger**	DTW During Drilling (ft):	**N/A**
Drilling Equipment:	**Hand Auger**	DTW After Drilling (ft):	**N/A**
Driller:	**Clint Elliott**	Ground Surface Elev. (ft):	**3,806.00**
Logged By:	**Cianna Logie**	Location (Lat, Long):	**32.824223, -104.089118**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT: Sample Type	COLLECT: Time	COLLECT: Blow Counts	COLLECT: Recovery (ft)	SOIL/ROCK VISUAL DESCRIPTION	MEASURE: PID (ppm)	MEASURE: Lab Sample	DEPTH (ft)
0								(0') Fat CLAY (CH); few fine-medium sand, few silt, mostly clay, high plasticity, hard, moist, 10YR (7/3) very pale brown, mix of fresh caliche and hard caliche that was present at the subject site; strong hydrochloric acid reaction, hydrocarbon odor.			0
1											1
2								(1.5') Boring terminated			2
3											3
4											4
5											5

NOTES: Location is inside of containment at active oil and gas facility. Therefore, a stainless steel hand auger was utilized to conduct the borehole at this site.

generated using LogitEasy.com

Attachment E

Run Ticket

105,765

Ray's Trammell

Loco Hills, (575) 677-2111
Day or Nite
Delivery Receipt

L/E Services LLC

P.O. Box 98
Loco Hills, N.M. - 88255

542067

Date 10-31-18
Truck No. 1003 VT
Capacity 130
Shipped From PW Containment
Lease ST B20
Shipped To Sena
Well No. BAR

DESCRIPTION	BARRELS	RATE	CHARGE	TAX	TOTAL
PW	480				
VT	9	95.00	855.00	50.94	905.94

Remarks: 3 loads 130 * 390
1 load 90 90
480

Top Gauge ____ Bottom Gauge ____

COMPANY

Start ____ Finish ____ Total ____

Driver Miguel Lorango 180
Longfellow

BP&S Form No. 4226-PM

Attachment F

Full Analytical Results and Chain-of-Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 490-169021-1
TestAmerica SDG: Longfellow-State 20B Release (1RP-5158)
Client Project/Site: 20B (32.824229,-104.089222)

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

Attn: Debi Sport Moore

Jennifer Gambill

Authorized for release by:
3/4/2019 1:54:55 PM

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

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Certification Summary 47
Chain of Custody 48

Sample Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-169021-1	SB1-001 @ 0-1'bgs	Solid	02/20/19 11:36	02/23/19 09:10
490-169021-2	SB1-001 @ 1-2'bgs	Solid	02/20/19 11:36	02/23/19 09:10
490-169021-3	SB1-001 @ 2-3'bgs	Solid	02/20/19 11:36	02/23/19 09:10
490-169021-4	SB1-001 @ 5-6'bgs	Solid	02/20/19 11:54	02/23/19 09:10
490-169021-5	SB2-001 @ 0-1'bgs	Solid	02/20/19 12:15	02/23/19 09:10
490-169021-6	SB2-001 @ 1-2'bgs	Solid	02/20/19 12:15	02/23/19 09:10
490-169021-7	SB2-001 @ 2-3'bgs	Solid	02/20/19 12:15	02/23/19 09:10
490-169021-8	SB3-001 @ 0-1'bgs	Solid	02/20/19 12:31	02/23/19 09:10
490-169021-9	SB3-001 @ 1-2'bgs	Solid	02/20/19 12:31	02/23/19 09:10
490-169021-10	SB3-001 @ 2-3'bgs	Solid	02/20/19 12:31	02/23/19 09:10
490-169021-11	SB3-001 @ 5-6'bgs	Solid	02/20/19 12:43	02/23/19 09:10
490-169021-12	SB3-001 @ 7-8'bgs	Solid	02/20/19 12:43	02/23/19 09:10
490-169021-13	SB4-001 @ 1'bgs	Solid	02/20/19 12:56	02/23/19 09:10
490-169021-14	SB4-001 @ 2'bgs	Solid	02/20/19 12:59	02/23/19 09:10
490-169021-15	SB4-001 @ 3'bgs	Solid	02/20/19 13:05	02/23/19 09:10
490-169021-16	SB4-001 @ 3.5'bgs	Solid	02/20/19 13:11	02/23/19 09:10
490-169021-17	SB5-001 @ 1'bgs	Solid	02/20/19 13:16	02/23/19 09:10
490-169021-18	SB5-001 @ 1.5'bgs	Solid	02/20/19 13:20	02/23/19 09:10

Case Narrative

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Job ID: 490-169021-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-169021-1

Comments
No additional comments.

Receipt
The samples were received on 2/23/2019 9:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

GC/MS VOA
Method(s) 8260B: Surrogate recovery for the following sample was outside the upper control limit: SB1-001 @ 1-2'bgs (490-169021-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: Internal standard (ISTD) response for 1,4-Dichlorobenzene-d4 in the following samples was outside of acceptance limits: SB1-001 @ 1-2'bgs (490-169021-2). None of the compounds reported in the sample are associated with this ISTD; therefore, the data is reported.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-577346.

Method(s) 8260B: Surrogate recovery for the following samples were outside control limits: SB4-001 @ 1'bgs (490-169021-13), SB4-001 @ 3.5'bgs (490-169021-16), SB5-001 @ 1'bgs (490-169021-17), SB5-001 @ 1.5'bgs (490-169021-18), (490-169021-A-18-F MS) and (490-169021-A-18-G MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: Internal standard (ISTD) response for 1,4-dichlorobenzene-d4 in the following samples was outside of acceptance limits: SB4-001 @ 1'bgs (490-169021-13), SB5-001 @ 1'bgs (490-169021-17) and SB5-001 @ 1.5'bgs (490-169021-18). None of the compounds reported in the sample are associated with this ISTD; therefore, the data is reported.

Method(s) 8260B: The following samples were diluted due to the nature of the sample matrix: SB4-001 @ 3'bgs (490-169021-15) and SB4-001 @ 3.5'bgs (490-169021-16). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: MSD was analyzed outside 12 hr clock time due to instrument error. Data has been reported. LCS/LCSD is also provided.

Method(s) 8260B: Internal standard responses were outside of acceptance limits for the following samples: (490-169021-A-18-F MS) and (490-169021-A-18-G MSD). The samples show evidence of matrix interference.

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

HPLC/IC
Method(s) 300.0: The following samples were diluted due to the nature of the sample matrix: SB1-001 @ 0-1'bgs (490-169021-1), SB1-001 @ 1-2'bgs (490-169021-2), SB1-001 @ 2-3'bgs (490-169021-3), SB1-001 @ 5-6'bgs (490-169021-4), SB2-001 @ 0-1'bgs (490-169021-5), SB2-001 @ 1-2'bgs (490-169021-6), SB2-001 @ 2-3'bgs (490-169021-7), SB3-001 @ 2-3'bgs (490-169021-10), SB4-001 @ 1'bgs (490-169021-13), SB4-001 @ 2'bgs (490-169021-14), SB4-001 @ 3'bgs (490-169021-15), SB4-001 @ 3.5'bgs (490-169021-16), SB5-001 @ 1'bgs (490-169021-17) and SB5-001 @ 1.5'bgs (490-169021-18). Elevated reporting limits (RLs) are provided.

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

GC VOA
Method(s) 8015B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 490-577254 and analytical batch 490-577344 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Case Narrative

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Job ID: 490-169021-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

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

GC Semi VOA
Method(s) 8015B: Surrogate recovery for the following samples were outside control limits: SB1-001 @ 0-1'bgs (490-169021-1), SB1-001 @ 1-2'bgs (490-169021-2), SB4-001 @ 1'bgs (490-169021-13), SB4-001 @ 2'bgs (490-169021-14), SB4-001 @ 3'bgs (490-169021-15), SB5-001 @ 1'bgs (490-169021-17), (490-169021-A-1-G MS) and (490-169021-A-1-H MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed. Elevated reporting limits are provided.

Method(s) 8015B: The following sample was diluted due to the nature of the sample matrix: SB4-001 @ 3.5'bgs (490-169021-16). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method(s) 8015B: The following samples were diluted to bring the concentration of target analytes within the calibration range: SB1-001 @ 0-1'bgs (490-169021-1), SB1-001 @ 1-2'bgs (490-169021-2), SB4-001 @ 1'bgs (490-169021-13), SB4-001 @ 2'bgs (490-169021-14), SB4-001 @ 3'bgs (490-169021-15), SB5-001 @ 1'bgs (490-169021-17), (490-169021-A-1-G MS) and (490-169021-A-1-H MSD). Elevated reporting limits (RLs) are provided.

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

Organic Prep
Method(s) 3550C: The following sample was diluted due to the nature of the sample matrix: SB4-001 @ 1'bgs (490-169021-13).

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

Definitions/Glossary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Qualifiers

GC/MS 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.
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB1-001 @ 0-1'bgs
Date Collected: 02/20/19 11:36
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00199	0.000666	mg/Kg		02/25/19 10:55	02/25/19 19:14	1
Ethylbenzene	ND		0.00199	0.000666	mg/Kg		02/25/19 10:55	02/25/19 19:14	1
Toluene	**0.000761**	**J**	0.00199	0.000736	mg/Kg		02/25/19 10:55	02/25/19 19:14	1
Xylenes, Total	ND		0.00596	0.00122	mg/Kg		02/25/19 10:55	02/25/19 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*70 - 130*	*02/25/19 10:55*	*02/25/19 19:14*	*1*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*02/25/19 10:55*	*02/25/19 19:14*	*1*
Dibromofluoromethane (Surr)	*92*		*70 - 130*	*02/25/19 10:55*	*02/25/19 19:14*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*	*02/25/19 10:55*	*02/25/19 19:14*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.40	2.20	mg/Kg		02/25/19 10:55	02/25/19 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*93*		*50 - 150*	*02/25/19 10:55*	*02/25/19 19:36*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**184**		24.8	12.4	mg/Kg		02/27/19 18:38	03/01/19 21:45	5
MRO (C28-C35)	**198**		24.8	12.4	mg/Kg		02/27/19 18:38	03/01/19 21:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*36*	*X*	*50 - 150*	*02/27/19 18:38*	*03/01/19 21:45*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**702**		101	70.9	mg/Kg			02/28/19 22:28	10

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB1-001 @ 1-2'bgs
Date Collected: 02/20/19 11:36
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00191	0.000639	mg/Kg		02/25/19 10:55	02/25/19 19:44	1
Ethylbenzene	ND		0.00191	0.000639	mg/Kg		02/25/19 10:55	02/25/19 19:44	1
Toluene	**0.00101**	**J**	0.00191	0.000706	mg/Kg		02/25/19 10:55	02/25/19 19:44	1
Xylenes, Total	ND		0.00573	0.00117	mg/Kg		02/25/19 10:55	02/25/19 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*131*	*X*	*70 - 130*	*02/25/19 10:55*	*02/25/19 19:44*	*1*
4-Bromofluorobenzene (Surr)	*119*	*	*70 - 130*	*02/25/19 10:55*	*02/25/19 19:44*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*02/25/19 10:55*	*02/25/19 19:44*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*	*02/25/19 10:55*	*02/25/19 19:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.92	2.46	mg/Kg		02/25/19 10:55	02/25/19 20:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*91*		*50 - 150*	*02/25/19 10:55*	*02/25/19 20:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**360**		24.9	12.5	mg/Kg		02/27/19 18:38	03/01/19 22:35	5
MRO (C28-C35)	**343**		24.9	12.5	mg/Kg		02/27/19 18:38	03/01/19 22:35	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*43*	*X*	*50 - 150*	*02/27/19 18:38*	*03/01/19 22:35*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**687**		99.5	69.7	mg/Kg			02/28/19 22:44	10

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB1-001 @ 2-3'bgs
Date Collected: 02/20/19 11:36
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-3
Matrix: Solid

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		02/25/19 10:55	02/25/19 20:13	1
Ethylbenzene	ND		0.00190	0.000638	mg/Kg		02/25/19 10:55	02/25/19 20:13	1
Toluene	ND		0.00190	0.000705	mg/Kg		02/25/19 10:55	02/25/19 20:13	1
Xylenes, Total	ND		0.00571	0.00117	mg/Kg		02/25/19 10:55	02/25/19 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*125*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:13*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:13*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:13*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.24	2.12	mg/Kg		02/25/19 10:55	02/25/19 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*50 - 150*	*02/25/19 10:55*	*02/25/19 20:43*	*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		4.89	2.45	mg/Kg		02/27/19 18:38	03/01/19 17:49	1
MRO (C28-C35)	ND		4.89	2.45	mg/Kg		02/27/19 18:38	03/01/19 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*67*		*50 - 150*	*02/27/19 18:38*	*03/01/19 17:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	234		19.8	13.9	mg/Kg			02/28/19 23:01	2

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB1-001 @ 5-6'bgs
Date Collected: 02/20/19 11:54
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-4
Matrix: Solid

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		02/25/19 10:55	02/25/19 20:43	1
Ethylbenzene	ND		0.00175	0.000585	mg/Kg		02/25/19 10:55	02/25/19 20:43	1
Toluene	ND		0.00175	0.000646	mg/Kg		02/25/19 10:55	02/25/19 20:43	1
Xylenes, Total	ND		0.00524	0.00107	mg/Kg		02/25/19 10:55	02/25/19 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*125*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:43*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:43*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:43*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*	*02/25/19 10:55*	*02/25/19 20:43*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.95	2.48	mg/Kg		02/25/19 10:55	02/25/19 21:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*95*		*50 - 150*	*02/25/19 10:55*	*02/25/19 21:17*	*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		02/27/19 18:38	03/01/19 18:06	1
MRO (C28-C35)	ND		4.99	2.50	mg/Kg		02/27/19 18:38	03/01/19 18:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*74*		*50 - 150*	*02/27/19 18:38*	*03/01/19 18:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2530**		201	141	mg/Kg			02/28/19 23:34	20

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB2-001 @ 0-1'bgs
Date Collected: 02/20/19 12:15
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00195	0.000654	mg/Kg		02/25/19 10:55	02/25/19 21:12	1
Ethylbenzene	ND		0.00195	0.000654	mg/Kg		02/25/19 10:55	02/25/19 21:12	1
Toluene	ND		0.00195	0.000723	mg/Kg		02/25/19 10:55	02/25/19 21:12	1
Xylenes, Total	ND		0.00586	0.00120	mg/Kg		02/25/19 10:55	02/25/19 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*130*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:12*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:12*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:12*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:12*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.67	2.34	mg/Kg		02/25/19 10:55	02/25/19 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*92*		*50 - 150*	*02/25/19 10:55*	*02/25/19 21:50*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**205**		19.9	9.93	mg/Kg		02/27/19 18:38	03/01/19 22:52	4
MRO (C28-C35)	**203**		19.9	9.93	mg/Kg		02/27/19 18:38	03/01/19 22:52	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*56*		*50 - 150*	*02/27/19 18:38*	*03/01/19 22:52*	*4*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**831**		101	70.7	mg/Kg			02/28/19 23:51	10

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB2-001 @ 1-2'bgs
Date Collected: 02/20/19 12:15
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00185	0.000620	mg/Kg		02/25/19 10:55	02/25/19 21:42	1
Ethylbenzene	ND		0.00185	0.000620	mg/Kg		02/25/19 10:55	02/25/19 21:42	1
Toluene	ND		0.00185	0.000685	mg/Kg		02/25/19 10:55	02/25/19 21:42	1
Xylenes, Total	ND		0.00556	0.00114	mg/Kg		02/25/19 10:55	02/25/19 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:42*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:42*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:42*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*	*02/25/19 10:55*	*02/25/19 21:42*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND	F1	4.65	2.32	mg/Kg		02/25/19 10:55	02/26/19 06:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*93*		*50 - 150*	*02/25/19 10:55*	*02/26/19 06:12*	*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		4.98	2.49	mg/Kg		02/27/19 18:38	03/01/19 18:23	1
MRO (C28-C35)	**3.16**	**J**	4.98	2.49	mg/Kg		02/27/19 18:38	03/01/19 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*70*		*50 - 150*	*02/27/19 18:38*	*03/01/19 18:23*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**348**		49.4	34.6	mg/Kg			03/01/19 00:07	5

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB2-001 @ 2-3'bgs
Date Collected: 02/20/19 12:15
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00194	0.000650	mg/Kg		02/25/19 10:55	02/25/19 22:12	1
Ethylbenzene	ND		0.00194	0.000650	mg/Kg		02/25/19 10:55	02/25/19 22:12	1
Toluene	ND		0.00194	0.000718	mg/Kg		02/25/19 10:55	02/25/19 22:12	1
Xylenes, Total	ND		0.00583	0.00119	mg/Kg		02/25/19 10:55	02/25/19 22:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:12*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:12*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:12*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:12*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.60	2.30	mg/Kg		02/25/19 10:55	02/25/19 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*50 - 150*	*02/25/19 10:55*	*02/25/19 22:24*	*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		4.90	2.45	mg/Kg		02/27/19 18:38	03/01/19 18:40	1
MRO (C28-C35)	**3.08**	**J**	4.90	2.45	mg/Kg		02/27/19 18:38	03/01/19 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*74*		*50 - 150*	*02/27/19 18:38*	*03/01/19 18:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**341**		49.3	34.5	mg/Kg			03/01/19 00:24	5

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB3-001 @ 0-1'bgs
Date Collected: 02/20/19 12:31
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-8
Matrix: Solid

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		02/25/19 10:55	02/25/19 22:41	1
Ethylbenzene	ND		0.00188	0.000631	mg/Kg		02/25/19 10:55	02/25/19 22:41	1
Toluene	ND		0.00188	0.000697	mg/Kg		02/25/19 10:55	02/25/19 22:41	1
Xylenes, Total	ND		0.00565	0.00116	mg/Kg		02/25/19 10:55	02/25/19 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*126*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:41*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:41*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:41*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/25/19 22:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.64	2.32	mg/Kg		02/25/19 10:55	02/25/19 22:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*50 - 150*	*02/25/19 10:55*	*02/25/19 22:57*	*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		4.90	2.45	mg/Kg		02/27/19 18:38	03/01/19 18:57	1
MRO (C28-C35)	**3.99**	**J**	4.90	2.45	mg/Kg		02/27/19 18:38	03/01/19 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*75*		*50 - 150*	*02/27/19 18:38*	*03/01/19 18:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.0**		10.1	7.07	mg/Kg			02/28/19 11:18	1

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB3-001 @ 1-2'bgs
Date Collected: 02/20/19 12:31
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-9
Matrix: Solid

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		02/25/19 10:55	02/25/19 23:11	1
Ethylbenzene	ND		0.00180	0.000604	mg/Kg		02/25/19 10:55	02/25/19 23:11	1
Toluene	ND		0.00180	0.000667	mg/Kg		02/25/19 10:55	02/25/19 23:11	1
Xylenes, Total	ND		0.00541	0.00111	mg/Kg		02/25/19 10:55	02/25/19 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*124*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:11*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:11*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:11*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:11*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.39	2.19	mg/Kg		02/25/19 10:55	02/25/19 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*95*		*50 - 150*	*02/25/19 10:55*	*02/25/19 23:31*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**2.64**	**J**	4.90	2.45	mg/Kg		02/27/19 18:38	03/01/19 19:13	1
MRO (C28-C35)	**4.45**	**J**	4.90	2.45	mg/Kg		02/27/19 18:38	03/01/19 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*74*		*50 - 150*	*02/27/19 18:38*	*03/01/19 19:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.6**	**F1**	9.90	6.93	mg/Kg			02/27/19 11:13	1

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB3-001 @ 2-3'bgs
Date Collected: 02/20/19 12:31
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-10
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00196	0.000657	mg/Kg		02/25/19 10:55	02/25/19 23:41	1
Ethylbenzene	ND		0.00196	0.000657	mg/Kg		02/25/19 10:55	02/25/19 23:41	1
Toluene	ND		0.00196	0.000725	mg/Kg		02/25/19 10:55	02/25/19 23:41	1
Xylenes, Total	ND		0.00588	0.00121	mg/Kg		02/25/19 10:55	02/25/19 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:41*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:41*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:41*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*	*02/25/19 10:55*	*02/25/19 23:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.67	2.34	mg/Kg		02/25/19 10:55	02/26/19 00:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*92*		*50 - 150*	*02/25/19 10:55*	*02/26/19 00:04*	*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		4.98	2.49	mg/Kg		02/27/19 18:38	03/01/19 19:30	1
MRO (C28-C35)	**2.91**	**J**	4.98	2.49	mg/Kg		02/27/19 18:38	03/01/19 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*70*		*50 - 150*	*02/27/19 18:38*	*03/01/19 19:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**475**		20.3	14.2	mg/Kg			02/27/19 16:10	2

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB3-001 @ 5-6'bgs
Date Collected: 02/20/19 12:43
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00167	0.000559	mg/Kg		02/25/19 10:55	02/26/19 00:10	1
Ethylbenzene	ND		0.00167	0.000559	mg/Kg		02/25/19 10:55	02/26/19 00:10	1
Toluene	ND		0.00167	0.000618	mg/Kg		02/25/19 10:55	02/26/19 00:10	1
Xylenes, Total	ND		0.00501	0.00103	mg/Kg		02/25/19 10:55	02/26/19 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 130*	*02/25/19 10:55*	*02/26/19 00:10*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/26/19 00:10*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*02/25/19 10:55*	*02/26/19 00:10*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*	*02/25/19 10:55*	*02/26/19 00:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.68	2.34	mg/Kg		02/25/19 10:55	02/26/19 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*93*		*50 - 150*	*02/25/19 10:55*	*02/26/19 00:38*	*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		4.84	2.42	mg/Kg		02/27/19 18:38	03/01/19 19:47	1
MRO (C28-C35)	ND		4.84	2.42	mg/Kg		02/27/19 18:38	03/01/19 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*65*		*50 - 150*	*02/27/19 18:38*	*03/01/19 19:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.2		9.92	6.94	mg/Kg			02/27/19 12:13	1

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB3-001 @ 7-8'bgs
Date Collected: 02/20/19 12:43
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-12
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00187	0.000626	mg/Kg		02/25/19 10:55	02/26/19 15:06	1
Ethylbenzene	ND		0.00187	0.000626	mg/Kg		02/25/19 10:55	02/26/19 15:06	1
Toluene	ND		0.00187	0.000692	mg/Kg		02/25/19 10:55	02/26/19 15:06	1
Xylenes, Total	ND		0.00561	0.00115	mg/Kg		02/25/19 10:55	02/26/19 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*	*02/25/19 10:55*	*02/26/19 15:06*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/25/19 10:55*	*02/26/19 15:06*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*	*02/25/19 10:55*	*02/26/19 15:06*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*	*02/25/19 10:55*	*02/26/19 15:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.55	2.28	mg/Kg		02/25/19 10:55	02/26/19 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*95*		*50 - 150*	*02/25/19 10:55*	*02/26/19 01:11*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.91	2.45	mg/Kg		02/27/19 18:38	03/01/19 20:04	1
MRO (C28-C35)	ND		4.91	2.45	mg/Kg		02/27/19 18:38	03/01/19 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*72*		*50 - 150*	*02/27/19 18:38*	*03/01/19 20:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**50.7**		9.95	6.96	mg/Kg			02/27/19 12:28	1

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB4-001 @ 1'bgs

Date Collected: 02/20/19 12:56
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-13

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.00169	0.000568	mg/Kg		02/25/19 10:55	02/26/19 15:35	1
Ethylbenzene	**0.00689**		0.00169	0.000568	mg/Kg		02/25/19 10:55	02/26/19 15:35	1
Toluene	**0.00221**		0.00169	0.000627	mg/Kg		02/25/19 10:55	02/26/19 15:35	1
Xylenes, Total	**0.0117**		0.00508	0.00104	mg/Kg		02/25/19 10:55	02/26/19 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*	*02/25/19 10:55*	*02/26/19 15:35*	*1*
4-Bromofluorobenzene (Surr)	*149*	*X **	*70 - 130*	*02/25/19 10:55*	*02/26/19 15:35*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*	*02/25/19 10:55*	*02/26/19 15:35*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*02/25/19 10:55*	*02/26/19 15:35*	*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		02/25/19 10:55	02/26/19 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*50 - 150*	*02/25/19 10:55*	*02/26/19 01:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**380**		32.9	16.4	mg/Kg		02/27/19 18:38	03/01/19 23:08	4
MRO (C28-C35)	**262**		32.9	16.4	mg/Kg		02/27/19 18:38	03/01/19 23:08	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*38*	*X*	*50 - 150*	*02/27/19 18:38*	*03/01/19 23:08*	*4*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1130**		49.5	34.6	mg/Kg			02/27/19 16:25	5

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB4-001 @ 2'bgs

Date Collected: 02/20/19 12:59
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-14

Matrix: Solid

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		02/25/19 10:55	02/26/19 16:05	1
Ethylbenzene	**0.00929**		0.00192	0.000643	mg/Kg		02/25/19 10:55	02/26/19 16:05	1
Toluene	**0.00136**	**J**	0.00192	0.000710	mg/Kg		02/25/19 10:55	02/26/19 16:05	1
Xylenes, Total	**0.0124**		0.00576	0.00118	mg/Kg		02/25/19 10:55	02/26/19 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*	*02/25/19 10:55*	*02/26/19 16:05*	*1*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*02/25/19 10:55*	*02/26/19 16:05*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*	*02/25/19 10:55*	*02/26/19 16:05*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*	*02/25/19 10:55*	*02/26/19 16:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.26	2.13	mg/Kg		02/25/19 10:55	02/26/19 02:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*94*		*50 - 150*	*02/25/19 10:55*	*02/26/19 02:18*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**278**		19.7	9.84	mg/Kg		02/27/19 18:38	03/01/19 23:25	4
MRO (C28-C35)	**151**		19.7	9.84	mg/Kg		02/27/19 18:38	03/01/19 23:25	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*45*	*X*	*50 - 150*	*02/27/19 18:38*	*03/01/19 23:25*	*4*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3780**		201	141	mg/Kg			02/27/19 16:40	20

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB4-001 @ 3'bgs

Date Collected: 02/20/19 13:05
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-15

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0943	0.0321	mg/Kg		02/25/19 10:55	02/26/19 20:16	1
Ethylbenzene	**12.1**		0.0943	0.0321	mg/Kg		02/25/19 10:55	02/26/19 20:16	1
Toluene	**0.167**		0.0943	0.0349	mg/Kg		02/25/19 10:55	02/26/19 20:16	1
Xylenes, Total	**18.8**		0.283	0.0585	mg/Kg		02/25/19 10:55	02/26/19 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*71*		*70 - 130*	*02/25/19 10:55*	*02/26/19 20:16*	*1*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/25/19 10:55*	*02/26/19 20:16*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*	*02/25/19 10:55*	*02/26/19 20:16*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*02/25/19 10:55*	*02/26/19 20:16*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**264**		4.30	2.15	mg/Kg		02/25/19 10:55	02/26/19 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*91*		*50 - 150*	*02/25/19 10:55*	*02/26/19 03:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1590**		122	60.8	mg/Kg		02/27/19 18:38	03/02/19 16:29	25
MRO (C28-C35)	**463**		24.3	12.2	mg/Kg		02/27/19 18:38	03/01/19 23:42	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*151*	*X*	*50 - 150*	*02/27/19 18:38*	*03/01/19 23:42*	*5*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1030**		198	138	mg/Kg			02/27/19 13:27	20

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB4-001 @ 3.5'bgs

Date Collected: 02/20/19 13:11
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-16

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0853	0.0290	mg/Kg		02/25/19 10:55	02/26/19 21:14	1
Ethylbenzene	**16.8**		0.0853	0.0290	mg/Kg		02/25/19 10:55	02/26/19 21:14	1
Toluene	**0.203**		0.0853	0.0316	mg/Kg		02/25/19 10:55	02/26/19 21:14	1
Xylenes, Total	**23.0**		5.12	1.06	mg/Kg		02/25/19 10:55	02/26/19 21:43	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*73*		*70 - 130*	*02/25/19 10:55*	*02/26/19 21:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*77*		*70 - 130*	*02/25/19 10:55*	*02/26/19 21:43*	*20*
4-Bromofluorobenzene (Surr)	*141*	*X*	*70 - 130*	*02/25/19 10:55*	*02/26/19 21:14*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/26/19 21:43*	*20*
Dibromofluoromethane (Surr)	*93*		*70 - 130*	*02/25/19 10:55*	*02/26/19 21:14*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*	*02/25/19 10:55*	*02/26/19 21:43*	*20*
Toluene-d8 (Surr)	*98*		*70 - 130*	*02/25/19 10:55*	*02/26/19 21:14*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*02/25/19 10:55*	*02/26/19 21:43*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**400**		4.39	2.19	mg/Kg		02/25/19 10:55	02/26/19 05:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*90*		*50 - 150*	*02/25/19 10:55*	*02/26/19 05:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**2840**		124	62.0	mg/Kg		02/27/19 18:38	03/02/19 16:45	25
MRO (C28-C35)	**615**		124	62.0	mg/Kg		02/27/19 18:38	03/02/19 16:45	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*0*	*X*	*50 - 150*	*02/27/19 18:38*	*03/02/19 16:45*	*25*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1380**		199	139	mg/Kg			02/27/19 13:57	20

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB5-001 @ 1'bgs

Date Collected: 02/20/19 13:16
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-17

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0236		0.00185	0.000619	mg/Kg		02/25/19 10:55	02/26/19 16:35	1
Ethylbenzene	5.49		0.0942	0.0320	mg/Kg		02/25/19 10:55	02/26/19 19:47	1
Toluene	2.31		0.0942	0.0348	mg/Kg		02/25/19 10:55	02/26/19 19:47	1
Xylenes, Total	13.3		0.282	0.0584	mg/Kg		02/25/19 10:55	02/26/19 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*70 - 130*	*02/25/19 10:55*	*02/26/19 16:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*	*02/25/19 10:55*	*02/26/19 19:47*	*1*
4-Bromofluorobenzene (Surr)	*305*	*X **	*70 - 130*	*02/25/19 10:55*	*02/26/19 16:35*	*1*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*02/25/19 10:55*	*02/26/19 19:47*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*	*02/25/19 10:55*	*02/26/19 16:35*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*	*02/25/19 10:55*	*02/26/19 19:47*	*1*
Toluene-d8 (Surr)	*260*	*X*	*70 - 130*	*02/25/19 10:55*	*02/26/19 16:35*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*	*02/25/19 10:55*	*02/26/19 19:47*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	220		4.64	2.32	mg/Kg		02/25/19 10:55	02/26/19 02:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*91*		*50 - 150*	*02/25/19 10:55*	*02/26/19 02:51*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	1910		97.8	48.9	mg/Kg		02/27/19 18:38	03/02/19 17:18	20
MRO (C28-C35)	805		48.9	24.5	mg/Kg		02/27/19 18:38	03/02/19 00:16	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*0*	*X*	*50 - 150*	*02/27/19 18:38*	*03/02/19 00:16*	*10*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11500		496	347	mg/Kg			02/27/19 14:56	50

Client Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB5-001 @ 1.5'bgs

Date Collected: 02/20/19 13:20
Date Received: 02/23/19 09:10

Lab Sample ID: 490-169021-18

Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0321		0.00182	0.000609	mg/Kg		02/25/19 10:55	02/26/19 17:05	1
Ethylbenzene	9.25		0.0992	0.0337	mg/Kg		02/25/19 10:55	02/26/19 22:11	1
Toluene	4.67		0.0992	0.0367	mg/Kg		02/25/19 10:55	02/26/19 22:11	1
Xylenes, Total	19.6		0.298	0.0615	mg/Kg		02/25/19 10:55	02/26/19 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*70 - 130*	*02/25/19 10:55*	*02/26/19 17:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*77*		*70 - 130*	*02/25/19 10:55*	*02/26/19 22:11*	*1*
4-Bromofluorobenzene (Surr)	*482*	*X **	*70 - 130*	*02/25/19 10:55*	*02/26/19 17:05*	*1*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*02/25/19 10:55*	*02/26/19 22:11*	*1*
Dibromofluoromethane (Surr)	*111*		*70 - 130*	*02/25/19 10:55*	*02/26/19 17:05*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*02/25/19 10:55*	*02/26/19 22:11*	*1*
Toluene-d8 (Surr)	*271*	*X*	*70 - 130*	*02/25/19 10:55*	*02/26/19 17:05*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*	*02/25/19 10:55*	*02/26/19 22:11*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	274		4.30	2.15	mg/Kg		02/25/19 10:55	02/26/19 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*92*		*50 - 150*	*02/25/19 10:55*	*02/26/19 03:25*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3200		98.1	49.0	mg/Kg		02/27/19 18:38	03/02/19 17:35	20
MRO (C28-C35)	1110		49.0	24.5	mg/Kg		02/27/19 18:38	03/02/19 00:32	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*115*		*50 - 150*	*02/27/19 18:38*	*03/02/19 00:32*	*10*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11100		500	350	mg/Kg			02/27/19 15:26	50

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

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

Lab Sample ID: 490-169021-18 MS — **Client Sample ID: SB5-001 @ 1.5'bgs**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 577457 — **Prep Batch: 577256**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0321		0.0469	0.08419		mg/Kg		111	21 - 150
Ethylbenzene	2.12	E	0.0469	2.924	E 4 *	mg/Kg		1717	10 - 150
Toluene	1.55	E	0.0469	2.155	E 4 *	mg/Kg		1288	17 - 150
Xylenes, Total	4.27		0.0938	5.924	4	mg/Kg		1763	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*134*	*X*	*70 - 130*
4-Bromofluorobenzene (Surr)	*727*	*X **	*70 - 130*
Dibromofluoromethane (Surr)	*122*		*70 - 130*
Toluene-d8 (Surr)	*328*	*X **	*70 - 130*

Lab Sample ID: 490-169021-18 MSD — **Client Sample ID: SB5-001 @ 1.5'bgs**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 577457 — **Prep Batch: 577256**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0321		0.0492	0.09455		mg/Kg		127	21 - 150	12	50
Ethylbenzene	2.12	E	0.0492	3.510	E 4 *	mg/Kg		2827	10 - 150	18	50
Toluene	1.55	E	0.0492	2.757	E 4 *	mg/Kg		2453	17 - 150	25	50
Xylenes, Total	4.27		0.0984	7.532	4	mg/Kg		3314	10 - 150	24	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*137*	*X*	*70 - 130*
4-Bromofluorobenzene (Surr)	*601*	*X **	*70 - 130*
Dibromofluoromethane (Surr)	*128*		*70 - 130*
Toluene-d8 (Surr)	*382*	*X **	*70 - 130*

Lab Sample ID: 490-169006-C-10-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 577452 — **Prep Batch: 577290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.194		3.01	3.295		mg/Kg		103	21 - 150
Ethylbenzene	0.0653	J	3.01	3.486		mg/Kg		114	10 - 150
Toluene	0.586		3.01	3.775		mg/Kg		106	17 - 150
Xylenes, Total	0.447		6.02	7.363		mg/Kg		115	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*70 - 130*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

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

Lab Sample ID: 490-169006-C-10-A MSD
Matrix: Solid
Analysis Batch: 577452

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 577290

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.194		3.01	3.299		mg/Kg		103	21 - 150	0	50
Ethylbenzene	0.0653	J	3.01	3.585		mg/Kg		117	10 - 150	3	50
Toluene	0.586		3.01	3.841		mg/Kg		108	17 - 150	2	50
Xylenes, Total	0.447		6.02	7.469		mg/Kg		117	10 - 150	1	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*82*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: MB 490-577346/7
Matrix: Solid
Analysis Batch: 577346

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			02/25/19 18:44	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			02/25/19 18:44	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/25/19 18:44	1
Xylenes, Total	ND		0.00600	0.00123	mg/Kg			02/25/19 18:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*70 - 130*		*02/25/19 18:44*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*02/25/19 18:44*	*1*
Dibromofluoromethane (Surr)	*91*		*70 - 130*		*02/25/19 18:44*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*02/25/19 18:44*	*1*

Lab Sample ID: LCS 490-577346/3
Matrix: Solid
Analysis Batch: 577346

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	0.04829		mg/Kg		97	70 - 130
Ethylbenzene	0.0500	0.04825		mg/Kg		97	70 - 130
Toluene	0.0500	0.04897		mg/Kg		98	70 - 130
Xylenes, Total	0.100	0.09914		mg/Kg		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Dibromofluoromethane (Surr)	*92*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

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

Lab Sample ID: LCSD 490-577346/4
Matrix: Solid
Analysis Batch: 577346

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	0.04872		mg/Kg		97	70 - 130	1	37
Ethylbenzene			0.0500	0.04867		mg/Kg		97	70 - 130	1	38
Toluene			0.0500	0.04900		mg/Kg		98	70 - 130	0	40
Xylenes, Total			0.100	0.09871		mg/Kg		99	70 - 130	0	38

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Dibromofluoromethane (Surr)	*92*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: MB 490-577452/8
Matrix: Solid
Analysis Batch: 577452

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.100	0.0340	mg/Kg			02/26/19 14:58	1
Ethylbenzene	ND		0.100	0.0340	mg/Kg			02/26/19 14:58	1
Toluene	ND		0.100	0.0370	mg/Kg			02/26/19 14:58	1
Xylenes, Total	ND		0.300	0.0620	mg/Kg			02/26/19 14:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*02/26/19 14:58*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*02/26/19 14:58*	*1*
Dibromofluoromethane (Surr)	*119*		*70 - 130*		*02/26/19 14:58*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*02/26/19 14:58*	*1*

Lab Sample ID: LCS 490-577452/5
Matrix: Solid
Analysis Batch: 577452

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			2.50	2.614		mg/Kg		105	70 - 130
Ethylbenzene			2.50	2.649		mg/Kg		106	70 - 130
Toluene			2.50	2.546		mg/Kg		102	70 - 130
Xylenes, Total			5.00	5.334		mg/Kg		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

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

Lab Sample ID: LCSD 490-577452/6
Matrix: Solid
Analysis Batch: 577452

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			2.50	2.738		mg/Kg		110	70 - 130	5	37
Ethylbenzene			2.50	2.813		mg/Kg		113	70 - 130	6	38
Toluene			2.50	2.694		mg/Kg		108	70 - 130	6	40
Xylenes, Total			5.00	5.660		mg/Kg		113	70 - 130	6	38

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: MB 490-577457/7
Matrix: Solid
Analysis Batch: 577457

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			02/26/19 14:36	1
Ethylbenzene	ND		0.00200	0.000670	mg/Kg			02/26/19 14:36	1
Toluene	ND		0.00200	0.000740	mg/Kg			02/26/19 14:36	1
Xylenes, Total	ND		0.00600	0.00123	mg/Kg			02/26/19 14:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*02/26/19 14:36*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*02/26/19 14:36*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*02/26/19 14:36*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*02/26/19 14:36*	*1*

Lab Sample ID: LCS 490-577457/3
Matrix: Solid
Analysis Batch: 577457

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	0.05187		mg/Kg		104	70 - 130
Ethylbenzene			0.0500	0.05271		mg/Kg		105	70 - 130
Toluene			0.0500	0.05011		mg/Kg		100	70 - 130
Xylenes, Total			0.100	0.1048		mg/Kg		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

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

Lab Sample ID: LCSD 490-577457/4
Matrix: Solid
Analysis Batch: 577457

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	0.05310		mg/Kg		106	70 - 130	2	37
Ethylbenzene			0.0500	0.05341		mg/Kg		107	70 - 130	1	38
Toluene			0.0500	0.04971		mg/Kg		99	70 - 130	1	40
Xylenes, Total			0.100	0.1079		mg/Kg		108	70 - 130	3	38

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

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

Lab Sample ID: MB 490-577254/1-A
Matrix: Solid
Analysis Batch: 577344

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 577254

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		02/25/19 10:53	02/25/19 19:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*92*		*50 - 150*	*02/25/19 10:53*	*02/25/19 19:02*	*1*

Lab Sample ID: LCS 490-577254/2-A
Matrix: Solid
Analysis Batch: 577344

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 577254

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics [C6 - C10]			500	522.9		mg/Kg		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*108*		*50 - 150*

Lab Sample ID: LCSD 490-577254/3-A
Matrix: Solid
Analysis Batch: 577344

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 577254

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]			500	506.8		mg/Kg		101	70 - 130	3	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*107*		*50 - 150*

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

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

Lab Sample ID: 490-169021-6 MS
Matrix: Solid
Analysis Batch: 577344

Client Sample ID: SB2-001 @ 1-2'bgs
Prep Type: Total/NA
Prep Batch: 577254

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics [C6 - C10]	ND	F1	465	213.0	F1	mg/Kg		46	56 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*93*		*50 - 150*

Lab Sample ID: 490-169021-6 MSD
Matrix: Solid
Analysis Batch: 577344

Client Sample ID: SB2-001 @ 1-2'bgs
Prep Type: Total/NA
Prep Batch: 577254

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	F1	465	183.9	F1	mg/Kg		40	56 - 130	15	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*91*		*50 - 150*

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

Lab Sample ID: MB 490-577883/1-A
Matrix: Solid
Analysis Batch: 578270

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 577883

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		02/27/19 18:38	03/01/19 12:20	1
MRO (C28-C35)	ND		5.00	2.50	mg/Kg		02/27/19 18:38	03/01/19 12:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*52*		*50 - 150*	*02/27/19 18:38*	*03/01/19 12:20*	*1*

Lab Sample ID: LCS 490-577883/2-A
Matrix: Solid
Analysis Batch: 578270

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 577883

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	40.0	35.66		mg/Kg		89	54 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl (Surr)	*72*		*50 - 150*

Lab Sample ID: LCSD 490-577883/3-A
Matrix: Solid
Analysis Batch: 578270

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 577883

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	40.0	31.72		mg/Kg		79	54 - 130	12	47

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl (Surr)	63		50 - 150

Lab Sample ID: 490-169021-1 MS — **Client Sample ID: SB1-001 @ 0-1'bgs**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 578270 — **Prep Batch: 577883**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	184		39.0	226.6	4	mg/Kg		108	10 - 142

Surrogate	MS %Recovery	MS Qualifier	Limits
o-Terphenyl (Surr)	40	X	50 - 150

Lab Sample ID: 490-169021-1 MSD — **Client Sample ID: SB1-001 @ 0-1'bgs**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 578270 — **Prep Batch: 577883**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	184		39.6	240.1	4	mg/Kg		141	10 - 142	6	47

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	43	X	50 - 150

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-577197/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577735

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		9.96	6.97	mg/Kg			02/27/19 10:29	1

Lab Sample ID: LCS 490-577197/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577735

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	99.73		mg/Kg		99	90 - 110

Lab Sample ID: LCSD 490-577197/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577735

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	99.7	98.49		mg/Kg		99	90 - 110	1	20

Lab Sample ID: 490-169021-9 MS — **Client Sample ID: SB3-001 @ 1-2'bgs**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577735

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	46.6	F1	99.8	163.6		mg/Kg		117	80 - 120

QC Sample Results

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 490-169021-9 MSD — **Client Sample ID: SB3-001 @ 1-2'bgs**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577735

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	46.6	F1	99.2	171.7	F1	mg/Kg		126	80 - 120	5	20

Lab Sample ID: MB 490-577196/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577832

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		9.96	6.97	mg/Kg			02/28/19 04:23	1

Lab Sample ID: LCS 490-577196/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577832

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	93.60		mg/Kg		93	90 - 110

Lab Sample ID: LCSD 490-577196/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577832

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	99.7	93.99		mg/Kg		94	90 - 110	0	20

Lab Sample ID: 490-169020-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577832

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		99.4	97.10		mg/Kg		98	80 - 120

Lab Sample ID: 490-169020-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 577832

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		99.8	96.97		mg/Kg		97	80 - 120	0	20

QC Association Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

GC/MS VOA

Prep Batch: 577255

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-15	SB4-001 @ 3'bgs	Total/NA	Solid	5030B	
490-169021-16	SB4-001 @ 3.5'bgs	Total/NA	Solid	5030B	
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	5030B	
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	5030B	

Prep Batch: 577256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Total/NA	Solid	5030B	
490-169021-2	SB1-001 @ 1-2'bgs	Total/NA	Solid	5030B	
490-169021-3	SB1-001 @ 2-3'bgs	Total/NA	Solid	5030B	
490-169021-4	SB1-001 @ 5-6'bgs	Total/NA	Solid	5030B	
490-169021-5	SB2-001 @ 0-1'bgs	Total/NA	Solid	5030B	
490-169021-6	SB2-001 @ 1-2'bgs	Total/NA	Solid	5030B	
490-169021-7	SB2-001 @ 2-3'bgs	Total/NA	Solid	5030B	
490-169021-8	SB3-001 @ 0-1'bgs	Total/NA	Solid	5030B	
490-169021-9	SB3-001 @ 1-2'bgs	Total/NA	Solid	5030B	
490-169021-10	SB3-001 @ 2-3'bgs	Total/NA	Solid	5030B	
490-169021-11	SB3-001 @ 5-6'bgs	Total/NA	Solid	5030B	
490-169021-12	SB3-001 @ 7-8'bgs	Total/NA	Solid	5030B	
490-169021-13	SB4-001 @ 1'bgs	Total/NA	Solid	5030B	
490-169021-14	SB4-001 @ 2'bgs	Total/NA	Solid	5030B	
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	5030B	
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	5030B	
490-169021-18 MS	SB5-001 @ 1.5'bgs	Total/NA	Solid	5030B	
490-169021-18 MSD	SB5-001 @ 1.5'bgs	Total/NA	Solid	5030B	

Prep Batch: 577290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169006-C-10-A MS	Matrix Spike	Total/NA	Solid	5035	
490-169006-C-10-A MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 577346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Total/NA	Solid	8260B	577256
490-169021-2	SB1-001 @ 1-2'bgs	Total/NA	Solid	8260B	577256
490-169021-3	SB1-001 @ 2-3'bgs	Total/NA	Solid	8260B	577256
490-169021-4	SB1-001 @ 5-6'bgs	Total/NA	Solid	8260B	577256
490-169021-5	SB2-001 @ 0-1'bgs	Total/NA	Solid	8260B	577256
490-169021-6	SB2-001 @ 1-2'bgs	Total/NA	Solid	8260B	577256
490-169021-7	SB2-001 @ 2-3'bgs	Total/NA	Solid	8260B	577256
490-169021-8	SB3-001 @ 0-1'bgs	Total/NA	Solid	8260B	577256
490-169021-9	SB3-001 @ 1-2'bgs	Total/NA	Solid	8260B	577256
490-169021-10	SB3-001 @ 2-3'bgs	Total/NA	Solid	8260B	577256
490-169021-11	SB3-001 @ 5-6'bgs	Total/NA	Solid	8260B	577256
MB 490-577346/7	Method Blank	Total/NA	Solid	8260B	
LCS 490-577346/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-577346/4	Lab Control Sample Dup	Total/NA	Solid	8260B	

Analysis Batch: 577452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-15	SB4-001 @ 3'bgs	Total/NA	Solid	8260B	577255

QC Association Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

GC/MS VOA (Continued)

Analysis Batch: 577452 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-16	SB4-001 @ 3.5'bgs	Total/NA	Solid	8260B	577255
490-169021-16	SB4-001 @ 3.5'bgs	Total/NA	Solid	8260B	577255
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	8260B	577255
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	8260B	577255
MB 490-577452/8	Method Blank	Total/NA	Solid	8260B	
LCS 490-577452/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-577452/6	Lab Control Sample Dup	Total/NA	Solid	8260B	
490-169006-C-10-A MS	Matrix Spike	Total/NA	Solid	8260B	577290
490-169006-C-10-A MSD	Matrix Spike Duplicate	Total/NA	Solid	8260B	577290

Analysis Batch: 577457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-12	SB3-001 @ 7-8'bgs	Total/NA	Solid	8260B	577256
490-169021-13	SB4-001 @ 1'bgs	Total/NA	Solid	8260B	577256
490-169021-14	SB4-001 @ 2'bgs	Total/NA	Solid	8260B	577256
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	8260B	577256
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	8260B	577256
MB 490-577457/7	Method Blank	Total/NA	Solid	8260B	
LCS 490-577457/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-577457/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
490-169021-18 MS	SB5-001 @ 1.5'bgs	Total/NA	Solid	8260B	577256
490-169021-18 MSD	SB5-001 @ 1.5'bgs	Total/NA	Solid	8260B	577256

GC VOA

Prep Batch: 577254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Total/NA	Solid	5030B	
490-169021-2	SB1-001 @ 1-2'bgs	Total/NA	Solid	5030B	
490-169021-3	SB1-001 @ 2-3'bgs	Total/NA	Solid	5030B	
490-169021-4	SB1-001 @ 5-6'bgs	Total/NA	Solid	5030B	
490-169021-5	SB2-001 @ 0-1'bgs	Total/NA	Solid	5030B	
490-169021-6	SB2-001 @ 1-2'bgs	Total/NA	Solid	5030B	
490-169021-7	SB2-001 @ 2-3'bgs	Total/NA	Solid	5030B	
490-169021-8	SB3-001 @ 0-1'bgs	Total/NA	Solid	5030B	
490-169021-9	SB3-001 @ 1-2'bgs	Total/NA	Solid	5030B	
490-169021-10	SB3-001 @ 2-3'bgs	Total/NA	Solid	5030B	
490-169021-11	SB3-001 @ 5-6'bgs	Total/NA	Solid	5030B	
490-169021-12	SB3-001 @ 7-8'bgs	Total/NA	Solid	5030B	
490-169021-13	SB4-001 @ 1'bgs	Total/NA	Solid	5030B	
490-169021-14	SB4-001 @ 2'bgs	Total/NA	Solid	5030B	
490-169021-15	SB4-001 @ 3'bgs	Total/NA	Solid	5030B	
490-169021-16	SB4-001 @ 3.5'bgs	Total/NA	Solid	5030B	
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	5030B	
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	5030B	
MB 490-577254/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 490-577254/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 490-577254/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
490-169021-6 MS	SB2-001 @ 1-2'bgs	Total/NA	Solid	5030B	
490-169021-6 MSD	SB2-001 @ 1-2'bgs	Total/NA	Solid	5030B	

QC Association Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

GC VOA (Continued)

Analysis Batch: 577344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Total/NA	Solid	8015B	577254
490-169021-2	SB1-001 @ 1-2'bgs	Total/NA	Solid	8015B	577254
490-169021-3	SB1-001 @ 2-3'bgs	Total/NA	Solid	8015B	577254
490-169021-4	SB1-001 @ 5-6'bgs	Total/NA	Solid	8015B	577254
490-169021-5	SB2-001 @ 0-1'bgs	Total/NA	Solid	8015B	577254
490-169021-6	SB2-001 @ 1-2'bgs	Total/NA	Solid	8015B	577254
490-169021-7	SB2-001 @ 2-3'bgs	Total/NA	Solid	8015B	577254
490-169021-8	SB3-001 @ 0-1'bgs	Total/NA	Solid	8015B	577254
490-169021-9	SB3-001 @ 1-2'bgs	Total/NA	Solid	8015B	577254
490-169021-10	SB3-001 @ 2-3'bgs	Total/NA	Solid	8015B	577254
490-169021-11	SB3-001 @ 5-6'bgs	Total/NA	Solid	8015B	577254
490-169021-12	SB3-001 @ 7-8'bgs	Total/NA	Solid	8015B	577254
490-169021-13	SB4-001 @ 1'bgs	Total/NA	Solid	8015B	577254
490-169021-14	SB4-001 @ 2'bgs	Total/NA	Solid	8015B	577254
490-169021-15	SB4-001 @ 3'bgs	Total/NA	Solid	8015B	577254
490-169021-16	SB4-001 @ 3.5'bgs	Total/NA	Solid	8015B	577254
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	8015B	577254
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	8015B	577254
MB 490-577254/1-A	Method Blank	Total/NA	Solid	8015B	577254
LCS 490-577254/2-A	Lab Control Sample	Total/NA	Solid	8015B	577254
LCSD 490-577254/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	577254
490-169021-6 MS	SB2-001 @ 1-2'bgs	Total/NA	Solid	8015B	577254
490-169021-6 MSD	SB2-001 @ 1-2'bgs	Total/NA	Solid	8015B	577254

GC Semi VOA

Prep Batch: 577883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Total/NA	Solid	3550C	
490-169021-2	SB1-001 @ 1-2'bgs	Total/NA	Solid	3550C	
490-169021-3	SB1-001 @ 2-3'bgs	Total/NA	Solid	3550C	
490-169021-4	SB1-001 @ 5-6'bgs	Total/NA	Solid	3550C	
490-169021-5	SB2-001 @ 0-1'bgs	Total/NA	Solid	3550C	
490-169021-6	SB2-001 @ 1-2'bgs	Total/NA	Solid	3550C	
490-169021-7	SB2-001 @ 2-3'bgs	Total/NA	Solid	3550C	
490-169021-8	SB3-001 @ 0-1'bgs	Total/NA	Solid	3550C	
490-169021-9	SB3-001 @ 1-2'bgs	Total/NA	Solid	3550C	
490-169021-10	SB3-001 @ 2-3'bgs	Total/NA	Solid	3550C	
490-169021-11	SB3-001 @ 5-6'bgs	Total/NA	Solid	3550C	
490-169021-12	SB3-001 @ 7-8'bgs	Total/NA	Solid	3550C	
490-169021-13	SB4-001 @ 1'bgs	Total/NA	Solid	3550C	
490-169021-14	SB4-001 @ 2'bgs	Total/NA	Solid	3550C	
490-169021-15	SB4-001 @ 3'bgs	Total/NA	Solid	3550C	
490-169021-16	SB4-001 @ 3.5'bgs	Total/NA	Solid	3550C	
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	3550C	
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	3550C	
MB 490-577883/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 490-577883/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 490-577883/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
490-169021-1 MS	SB1-001 @ 0-1'bgs	Total/NA	Solid	3550C	

QC Association Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

GC Semi VOA (Continued)

Prep Batch: 577883 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1 MSD	SB1-001 @ 0-1'bgs	Total/NA	Solid	3550C	

Analysis Batch: 578270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Total/NA	Solid	8015B	577883
490-169021-2	SB1-001 @ 1-2'bgs	Total/NA	Solid	8015B	577883
490-169021-3	SB1-001 @ 2-3'bgs	Total/NA	Solid	8015B	577883
490-169021-4	SB1-001 @ 5-6'bgs	Total/NA	Solid	8015B	577883
490-169021-5	SB2-001 @ 0-1'bgs	Total/NA	Solid	8015B	577883
490-169021-6	SB2-001 @ 1-2'bgs	Total/NA	Solid	8015B	577883
490-169021-7	SB2-001 @ 2-3'bgs	Total/NA	Solid	8015B	577883
490-169021-8	SB3-001 @ 0-1'bgs	Total/NA	Solid	8015B	577883
490-169021-9	SB3-001 @ 1-2'bgs	Total/NA	Solid	8015B	577883
490-169021-10	SB3-001 @ 2-3'bgs	Total/NA	Solid	8015B	577883
490-169021-11	SB3-001 @ 5-6'bgs	Total/NA	Solid	8015B	577883
490-169021-12	SB3-001 @ 7-8'bgs	Total/NA	Solid	8015B	577883
490-169021-13	SB4-001 @ 1'bgs	Total/NA	Solid	8015B	577883
490-169021-14	SB4-001 @ 2'bgs	Total/NA	Solid	8015B	577883
490-169021-15	SB4-001 @ 3'bgs	Total/NA	Solid	8015B	577883
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	8015B	577883
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	8015B	577883
MB 490-577883/1-A	Method Blank	Total/NA	Solid	8015B	577883
LCS 490-577883/2-A	Lab Control Sample	Total/NA	Solid	8015B	577883
LCSD 490-577883/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	577883
490-169021-1 MS	SB1-001 @ 0-1'bgs	Total/NA	Solid	8015B	577883
490-169021-1 MSD	SB1-001 @ 0-1'bgs	Total/NA	Solid	8015B	577883

Analysis Batch: 578434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-15	SB4-001 @ 3'bgs	Total/NA	Solid	8015B	577883
490-169021-16	SB4-001 @ 3.5'bgs	Total/NA	Solid	8015B	577883
490-169021-17	SB5-001 @ 1'bgs	Total/NA	Solid	8015B	577883
490-169021-18	SB5-001 @ 1.5'bgs	Total/NA	Solid	8015B	577883

HPLC/IC

Leach Batch: 577196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Soluble	Solid	DI Leach	
490-169021-2	SB1-001 @ 1-2'bgs	Soluble	Solid	DI Leach	
490-169021-3	SB1-001 @ 2-3'bgs	Soluble	Solid	DI Leach	
490-169021-4	SB1-001 @ 5-6'bgs	Soluble	Solid	DI Leach	
490-169021-5	SB2-001 @ 0-1'bgs	Soluble	Solid	DI Leach	
490-169021-6	SB2-001 @ 1-2'bgs	Soluble	Solid	DI Leach	
490-169021-7	SB2-001 @ 2-3'bgs	Soluble	Solid	DI Leach	
490-169021-8	SB3-001 @ 0-1'bgs	Soluble	Solid	DI Leach	
MB 490-577196/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-577196/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-577196/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
490-169020-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	

QC Association Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

HPLC/IC (Continued)

Leach Batch: 577196 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169020-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 577197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-9	SB3-001 @ 1-2'bgs	Soluble	Solid	DI Leach	
490-169021-10	SB3-001 @ 2-3'bgs	Soluble	Solid	DI Leach	
490-169021-11	SB3-001 @ 5-6'bgs	Soluble	Solid	DI Leach	
490-169021-12	SB3-001 @ 7-8'bgs	Soluble	Solid	DI Leach	
490-169021-13	SB4-001 @ 1'bgs	Soluble	Solid	DI Leach	
490-169021-14	SB4-001 @ 2'bgs	Soluble	Solid	DI Leach	
490-169021-15	SB4-001 @ 3'bgs	Soluble	Solid	DI Leach	
490-169021-16	SB4-001 @ 3.5'bgs	Soluble	Solid	DI Leach	
490-169021-17	SB5-001 @ 1'bgs	Soluble	Solid	DI Leach	
490-169021-18	SB5-001 @ 1.5'bgs	Soluble	Solid	DI Leach	
MB 490-577197/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 490-577197/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 490-577197/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
490-169021-9 MS	SB3-001 @ 1-2'bgs	Soluble	Solid	DI Leach	
490-169021-9 MSD	SB3-001 @ 1-2'bgs	Soluble	Solid	DI Leach	

Analysis Batch: 577735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-9	SB3-001 @ 1-2'bgs	Soluble	Solid	300.0	577197
490-169021-10	SB3-001 @ 2-3'bgs	Soluble	Solid	300.0	577197
490-169021-11	SB3-001 @ 5-6'bgs	Soluble	Solid	300.0	577197
490-169021-12	SB3-001 @ 7-8'bgs	Soluble	Solid	300.0	577197
490-169021-13	SB4-001 @ 1'bgs	Soluble	Solid	300.0	577197
490-169021-14	SB4-001 @ 2'bgs	Soluble	Solid	300.0	577197
490-169021-15	SB4-001 @ 3'bgs	Soluble	Solid	300.0	577197
490-169021-16	SB4-001 @ 3.5'bgs	Soluble	Solid	300.0	577197
490-169021-17	SB5-001 @ 1'bgs	Soluble	Solid	300.0	577197
490-169021-18	SB5-001 @ 1.5'bgs	Soluble	Solid	300.0	577197
MB 490-577197/1-A	Method Blank	Soluble	Solid	300.0	577197
LCS 490-577197/2-A	Lab Control Sample	Soluble	Solid	300.0	577197
LCSD 490-577197/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	577197
490-169021-9 MS	SB3-001 @ 1-2'bgs	Soluble	Solid	300.0	577197
490-169021-9 MSD	SB3-001 @ 1-2'bgs	Soluble	Solid	300.0	577197

Analysis Batch: 577832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-8	SB3-001 @ 0-1'bgs	Soluble	Solid	300.0	577196
MB 490-577196/1-A	Method Blank	Soluble	Solid	300.0	577196
LCS 490-577196/2-A	Lab Control Sample	Soluble	Solid	300.0	577196
LCSD 490-577196/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	577196
490-169020-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	577196
490-169020-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	577196

Analysis Batch: 578086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-1	SB1-001 @ 0-1'bgs	Soluble	Solid	300.0	577196
490-169021-2	SB1-001 @ 1-2'bgs	Soluble	Solid	300.0	577196

QC Association Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

HPLC/IC (Continued)

Analysis Batch: 578086 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-169021-3	SB1-001 @ 2-3'bgs	Soluble	Solid	300.0	577196
490-169021-4	SB1-001 @ 5-6'bgs	Soluble	Solid	300.0	577196
490-169021-5	SB2-001 @ 0-1'bgs	Soluble	Solid	300.0	577196
490-169021-6	SB2-001 @ 1-2'bgs	Soluble	Solid	300.0	577196
490-169021-7	SB2-001 @ 2-3'bgs	Soluble	Solid	300.0	577196

Lab Chronicle

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB1-001 @ 0-1'bgs

Lab Sample ID: 490-169021-1
Date Collected: 02/20/19 11:36
Matrix: Solid
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.03 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 19:14	SW1	TAL NSH
Total/NA	Prep	5030B			5.68 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 19:36	AK1	TAL NSH
Total/NA	Prep	3550C			25.23 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		5			578270	03/01/19 21:45	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9630 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		10			578086	02/28/19 22:28	SOO	TAL NSH

Client Sample ID: SB1-001 @ 1-2'bgs

Lab Sample ID: 490-169021-2
Date Collected: 02/20/19 11:36
Matrix: Solid
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.24 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 19:44	SW1	TAL NSH
Total/NA	Prep	5030B			5.08 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 20:10	AK1	TAL NSH
Total/NA	Prep	3550C			25.07 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		5			578270	03/01/19 22:35	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0138 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		10			578086	02/28/19 22:44	SOO	TAL NSH

Client Sample ID: SB1-001 @ 2-3'bgs

Lab Sample ID: 490-169021-3
Date Collected: 02/20/19 11:36
Matrix: Solid
Date Received: 02/23/19 09:10

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	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 20:13	SW1	TAL NSH
Total/NA	Prep	5030B			5.90 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 20:43	AK1	TAL NSH
Total/NA	Prep	3550C			25.54 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 17:49	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0280 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		2			578086	02/28/19 23:01	SOO	TAL NSH

Client Sample ID: SB1-001 @ 5-6'bgs

Lab Sample ID: 490-169021-4
Date Collected: 02/20/19 11:54
Matrix: Solid
Date Received: 02/23/19 09:10

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	577256	02/25/19 10:55	JLP	TAL NSH

TestAmerica Nashville

Lab Chronicle

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB1-001 @ 5-6'bgs

Lab Sample ID: 490-169021-4
Matrix: Solid
Date Collected: 02/20/19 11:54
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 20:43	SW1	TAL NSH
Total/NA	Prep	5030B			5.05 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 21:17	AK1	TAL NSH
Total/NA	Prep	3550C			25.03 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 18:06	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9848 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		20			578086	02/28/19 23:34	SOO	TAL NSH

Client Sample ID: SB2-001 @ 0-1'bgs

Lab Sample ID: 490-169021-5
Matrix: Solid
Date Collected: 02/20/19 12:15
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.12 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 21:12	SW1	TAL NSH
Total/NA	Prep	5030B			5.35 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 21:50	AK1	TAL NSH
Total/NA	Prep	3550C			25.17 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		4			578270	03/01/19 22:52	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9719 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		10			578086	02/28/19 23:51	SOO	TAL NSH

Client Sample ID: SB2-001 @ 1-2'bgs

Lab Sample ID: 490-169021-6
Matrix: Solid
Date Collected: 02/20/19 12:15
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.40 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 21:42	SW1	TAL NSH
Total/NA	Prep	5030B			5.38 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 06:12	AK1	TAL NSH
Total/NA	Prep	3550C			25.11 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 18:23	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0335 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		5			578086	03/01/19 00:07	SOO	TAL NSH

Client Sample ID: SB2-001 @ 2-3'bgs

Lab Sample ID: 490-169021-7
Matrix: Solid
Date Collected: 02/20/19 12:15
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.15 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 22:12	SW1	TAL NSH

TestAmerica Nashville

Lab Chronicle

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB2-001 @ 2-3'bgs

Lab Sample ID: 490-169021-7
Date Collected: 02/20/19 12:15
Matrix: Solid
Date Received: 02/23/19 09:10

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	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 22:24	AK1	TAL NSH
Total/NA	Prep	3550C			25.49 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 18:40	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0423 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		5			578086	03/01/19 00:24	SOO	TAL NSH

Client Sample ID: SB3-001 @ 0-1'bgs

Lab Sample ID: 490-169021-8
Date Collected: 02/20/19 12:31
Matrix: Solid
Date Received: 02/23/19 09:10

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	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 22:41	SW1	TAL NSH
Total/NA	Prep	5030B			5.39 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 22:57	AK1	TAL NSH
Total/NA	Prep	3550C			25.50 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 18:57	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9705 g	30 mL	577196	02/27/19 10:35	JHS	TAL NSH
Soluble	Analysis	300.0		1			577832	02/28/19 11:18	JHS	TAL NSH

Client Sample ID: SB3-001 @ 1-2'bgs

Lab Sample ID: 490-169021-9
Date Collected: 02/20/19 12:31
Matrix: Solid
Date Received: 02/23/19 09:10

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	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 23:11	SW1	TAL NSH
Total/NA	Prep	5030B			5.70 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/25/19 23:31	AK1	TAL NSH
Total/NA	Prep	3550C			25.52 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 19:13	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0309 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		1			577735	02/27/19 11:13	JHS	TAL NSH

Client Sample ID: SB3-001 @ 2-3'bgs

Lab Sample ID: 490-169021-10
Date Collected: 02/20/19 12:31
Matrix: Solid
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.10 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/25/19 23:41	SW1	TAL NSH
Total/NA	Prep	5030B			5.35 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH

Lab Chronicle

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB3-001 @ 2-3'bgs

Lab Sample ID: 490-169021-10
Date Collected: 02/20/19 12:31
Matrix: Solid
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 00:04	AK1	TAL NSH
Total/NA	Prep	3550C			25.12 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 19:30	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9510 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		2			577735	02/27/19 16:10	JHS	TAL NSH

Client Sample ID: SB3-001 @ 5-6'bgs

Lab Sample ID: 490-169021-11
Date Collected: 02/20/19 12:43
Matrix: Solid
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.99 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 g	577346	02/26/19 00:10	SW1	TAL NSH
Total/NA	Prep	5030B			5.34 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 00:38	AK1	TAL NSH
Total/NA	Prep	3550C			25.85 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 19:47	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0252 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		1			577735	02/27/19 12:13	JHS	TAL NSH

Client Sample ID: SB3-001 @ 7-8'bgs

Lab Sample ID: 490-169021-12
Date Collected: 02/20/19 12:43
Matrix: Solid
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.35 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	577457	02/26/19 15:06	S1S	TAL NSH
Total/NA	Prep	5030B			5.49 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 01:11	AK1	TAL NSH
Total/NA	Prep	3550C			25.46 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		1			578270	03/01/19 20:04	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0160 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		1			577735	02/27/19 12:28	JHS	TAL NSH

Client Sample ID: SB4-001 @ 1'bgs

Lab Sample ID: 490-169021-13
Date Collected: 02/20/19 12:56
Matrix: Solid
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.90 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	577457	02/26/19 15:35	S1S	TAL NSH
Total/NA	Prep	5030B			5.74 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 01:44	AK1	TAL NSH

Lab Chronicle

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB4-001 @ 1'bgs

Lab Sample ID: 490-169021-13
Matrix: Solid
Date Collected: 02/20/19 12:56
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.21 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		4			578270	03/01/19 23:08	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0305 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		5			577735	02/27/19 16:25	JHS	TAL NSH

Client Sample ID: SB4-001 @ 2'bgs

Lab Sample ID: 490-169021-14
Matrix: Solid
Date Collected: 02/20/19 12:59
Date Received: 02/23/19 09:10

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	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	577457	02/26/19 16:05	S1S	TAL NSH
Total/NA	Prep	5030B			5.87 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 02:18	AK1	TAL NSH
Total/NA	Prep	3550C			25.41 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		4			578270	03/01/19 23:25	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9889 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		20			577735	02/27/19 16:40	JHS	TAL NSH

Client Sample ID: SB4-001 @ 3'bgs

Lab Sample ID: 490-169021-15
Matrix: Solid
Date Collected: 02/20/19 13:05
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.30 g	5.0 mL	577255	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	0.1 mL	5 mL	577452	02/26/19 20:16	S1S	TAL NSH
Total/NA	Prep	5030B			5.81 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 03:58	AK1	TAL NSH
Total/NA	Prep	3550C			25.70 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		5			578270	03/01/19 23:42	GMH	TAL NSH
Total/NA	Prep	3550C			25.70 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		25			578434	03/02/19 16:29	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0328 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		20			577735	02/27/19 13:27	JHS	TAL NSH

Client Sample ID: SB4-001 @ 3.5'bgs

Lab Sample ID: 490-169021-16
Matrix: Solid
Date Collected: 02/20/19 13:11
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.86 g	5.0 mL	577255	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	0.1 mL	5 mL	577452	02/26/19 21:14	S1S	TAL NSH
Total/NA	Prep	5030B			5.86 g	5.0 mL	577255	02/25/19 10:55	JLP	TAL NSH

Lab Chronicle

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Client Sample ID: SB4-001 @ 3.5'bgs

Lab Sample ID: 490-169021-16
Matrix: Solid
Date Collected: 02/20/19 13:11
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	0.1 mL	5 mL	577452	02/26/19 21:43	S1S	TAL NSH
Total/NA	Prep	5030B			5.70 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 05:05	AK1	TAL NSH
Total/NA	Prep	3550C			25.22 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		25			578434	03/02/19 16:45	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0205 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		20			577735	02/27/19 13:57	JHS	TAL NSH

Client Sample ID: SB5-001 @ 1'bgs

Lab Sample ID: 490-169021-17
Matrix: Solid
Date Collected: 02/20/19 13:16
Date Received: 02/23/19 09:10

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	577255	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	0.1 mL	5 mL	577452	02/26/19 19:47	S1S	TAL NSH
Total/NA	Prep	5030B			5.41 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	577457	02/26/19 16:35	S1S	TAL NSH
Total/NA	Prep	5030B			5.39 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 02:51	AK1	TAL NSH
Total/NA	Prep	3550C			25.56 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		10			578270	03/02/19 00:16	GMH	TAL NSH
Total/NA	Prep	3550C			25.56 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		20			578434	03/02/19 17:18	GMH	TAL NSH
Soluble	Leach	DI Leach			3.0229 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		50			577735	02/27/19 14:56	JHS	TAL NSH

Client Sample ID: SB5-001 @ 1.5'bgs

Lab Sample ID: 490-169021-18
Matrix: Solid
Date Collected: 02/20/19 13:20
Date Received: 02/23/19 09:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			5.04 g	5.0 mL	577255	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	0.1 mL	5 mL	577452	02/26/19 22:11	S1S	TAL NSH
Total/NA	Prep	5030B			5.50 g	5.0 mL	577256	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5 g	5 mL	577457	02/26/19 17:05	S1S	TAL NSH
Total/NA	Prep	5030B			5.82 g	5.0 mL	577254	02/25/19 10:55	JLP	TAL NSH
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	577344	02/26/19 03:25	AK1	TAL NSH
Total/NA	Prep	3550C			25.49 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		10			578270	03/02/19 00:32	GMH	TAL NSH
Total/NA	Prep	3550C			25.49 g	1 mL	577883	02/27/19 18:38	AMD	TAL NSH
Total/NA	Analysis	8015B		20			578434	03/02/19 17:35	GMH	TAL NSH
Soluble	Leach	DI Leach			2.9979 g	30 mL	577197	02/27/19 08:20	JHS	TAL NSH
Soluble	Analysis	300.0		50			577735	02/27/19 15:26	JHS	TAL NSH

Lab Chronicle

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Laboratory References:

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

Method Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

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

Accreditation/Certification Summary

Client: Sport Environmental Services LLC
Project/Site: 20B (32.824229,-104.089222)

TestAmerica Job ID: 490-169021-1
SDG: Longfellow-State 20B Release (1RP-5158)

Laboratory: 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	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-19
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	12-09-18 *
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	03-31-19
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	03-31-19
North Carolina (WW/SW)	State Program	4	387	12-31-19
North Dakota	State Program	8	R-146	06-30-19
Ohio VAP	State Program	5	CL0033	07-06-19
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	12-01-19
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	02-28-19 *
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.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-169021 Chain of Custody

Cooler Received/Opened On 2/23/2019 @ 9:10

Time Samples Removed From Cooler 1643 Time Samples Placed In Storage 1655 (2 Hour Window)

1. Tracking # 9010 (last 4 digits, FedEx) Courier: Fedex

IR Gun ID 31470366 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 3.3 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) ACG

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. 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 (intial) AGT

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) AGT

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) AGT

I certify that I attached a label with the unique LIMS number to each container (intial) AGT

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204-3719
phone 615.726.0177 fax 615.726.3404

Chain of Custody Record

Midland #264

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Deborah S. Moore	Site Contact: Deborah S. Moore	Date:02/20/2019	COC No:
Sport Environmental Services, LLC	Tel/Fax: (432) 683-1100	Lab Contact: Jennifer Gambill	Carrier:	1 of 2 COCs
502 N. Big Spring St.	Analysis Turnaround Time			Sampler: Deborah S. Moore
Midland, TX 797101	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
(432) 683-1100 Phone	TAT if different from Below 5 days			Walk-in Client:
(888) 500-0622 FAX	☐ 2 weeks			Lab Sampling:
Project Name: Longfellow - State 20B Release (1RP-5158)	☐ 1 week			Job / SDG No.:
Site: State 20B (32.824229, -104.089222)	☐ 2 days			
P O # Purchase Order Not Required	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	300_ORGFMS - Chloride	8015B_DRO - DRO/MRO	8015B_GRO	8260B_BTEX	Sample Specific Notes:
SB1-001 @ 0-1'bgs	2/20/19	1136	G	S	1			X	X	X	X	
SB1-001 @ 1-2'bgs	2/20/19	1136	G	S	1			X	X	X	X	Loc: 490
SB1-001 @ 2-3'bgs	2/20/19	1136	G	S	1			X	X	X	X	169021
SB1-001 @ 5-6'bgs	2/20/19	1154	G	S	1			X	X	X	X	
SB2-001 @ 0-1'bgs	2/20/19	1215	G	S	1			X	X	X	X	
SB2-001 @ 1-2'bgs	2/20/19	1215	G	S	1			X	X	X	X	
SB2-001 @ 2-3'bgs	2/20/19	1215	G	S	1			X	X	X	X	
SB3-001 @ 0-1'bgs	2/20/19	1231	G	S	1			X	X	X	X	
SB3-001 @ 1-2'bgs	2/20/19	1231	G	S	1			X	X	X	X	
SB3-001 @ 2-3'bgs	2/20/19	1231	G	S	1			X	X	X	X	
SB3-001 @ 5-6'bgs	2/20/19	1243	G	S	1			X	X	X	X	
SB3-001 @ 7-8'bgs	2/20/19	1243	G	S	1			X	X	X	X	

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.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 3.3 Corr'd: Therm ID No.:

	Company	Date/Time		Company	Date/Time
Relinquished by:	Sport Env.	2-22-19 1302	Received by: Deborah S. Moore	Sport	2-22-19 1302
Relinquished by: Deborah S. Moore	Sport	2-22-19 1347	Received by:	TA	2-22-19 1348
Relinquished by:	TA	2-22-19 1348	Received in Laboratory by:	TA-MAS	2/23/19 0910

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204-3719
phone 615.726.0177 fax 615.726.3404

Chain of Custody Record

Midland #264

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Deborah S. Moore	Site Contact: Deborah S. Moore	Date:02/20/2019	COC No:
Sport Environmental Services, LLC	Tel/Fax: (432) 683-1100	Lab Contact: Jennifer Gambill	Carrier:	2 of 2 COCs
502 N. Big Spring St.	Analysis Turnaround Time			Sampler: Deborah S. Moore
Midland, TX 797101	☐ CALENDAR DAYS ☑ WORKING DAYS			For Lab Use Only:
(432) 683-1100 Phone	TAT if different from Below 5 days			Walk-in Client:
(888) 500-0622 FAX	☐ 2 weeks			Lab Sampling:
Project Name: Longfellow - State 20B Release (1RP-5158)	☐ 1 week			Job / SDG No.:
Site: State 20B (32.824229, -104.089222)	☐ 2 days			
P O # Purchase Order Not Required	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	300_ORGFMS - Chloride	8015B_DRO - DRO/MRO	8015B_GRO	8260B_BTEX	Sample Specific Notes:
SB4-001 @ 1'bgs	2/20/19	1256	G	S	1			X	X	X	X	
SB4-001 @ 2'bgs	2/20/19	1259	G	S	1			X	X	X	X	Loc: 490
SB4-001 @ 3'bgs	2/20/19	1305	G	S	1			X	X	X	X	169021
SB4-001 @ 3.5'bgs	2/20/19	1311	G	S	1			X	X	X	X	
SB5-001 @ 1'bgs	2/20/19	1316	G	S	1			X	X	X	X	
SB5-001 @ 1.5'bgs	2/20/19	1320	G	S	1			X	X	X	X	

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.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 3.3 Corr'd: Therm ID No.:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Sport Env.	2-22-19 1302	Deborah S. Moore	Sport	2-22-19 1302
Relinquished by: Deborah S. Moore	Company: Sport	Date/Time: 2-22-19 1347	Received by:	Company: TA	Date/Time: 2-22-19 1348
Relinquished by:	Company: TA	Date/Time: 2-22-19 1348	Received in Laboratory by:	Company: TA-MAS	Date/Time: 2/23/19 0910

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

Table 1: Longfellow State 20 B - Soil Sample Analytical Results of Constituents of Concern

	Soil Samples*										
	SB-LS20-04, 2-3	SB-LS20-04, 3-4	SB-LS20-04, 5-6	SB-LS20-04, 6-7	SB-LS20-04, 7-8	TRIP BLANK	SB-LS20-05, 1-2	SB-LS20-05, 2-3	SB-LS20-05, 3-4	TRIP BLANK	**NMOCD Site Closure Concentration Level (mg/kg)**
Sample date	22-Oct	22-Oct	22-Oct	22-Oct	22-Oct	22-Oct	22-Oct	22-Oct	22-Oct	23-Oct	
Analysis date	25-Oct	25-Oct	29-Oct	29-Oct	31-Oct	25-Oct	25-Oct	25-Oct	29-Oct	25-Oct	
Constituent											
Chloride	**631**	**2,580**	**1,230**	**1,060**	**NA**	NA	**3,510**	**3,460**	**4,780**	NA	**10,000**
TPH	**73.3**	**2,660**	**1,070**	**104**	<50.0	NA	**17,900**	**450**	**92.7**	NA	**2,500**
GRO+DRO	**73.3**	**2,444**	**916**	**104**	<50.0	NA	**15,700**	**342**	**92.7**	NA	**1,000**
Total BTEX	<0.00100	**14.5**	<0.00100	<0.000992	NA	<0.00100	**0.0422**	<0.00100	**0.00406**	<0.00100	**50**
Benzene	<0.00100	**0.0470**	<0.00100	<0.000992	NA	<0.00100	<0.000992	<0.00100	<0.00101	<0.00100	**10**

Notes

* Soil samples concentrations reported in mg/kg; trip blank concentrations reported in mg/L

NA Not assessed

Bold Constituent reported at concentration above laboratory detection limit for the analysis.

Shaded Constituent reported at concentration above NMOCD site closure concentration level.

Analytical Report 640850

for

Enviroclean-Altamira

Project Manager: David Lehmann

Longfellow Energy

LFECM 1901/ 1000

30-OCT-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

30-OCT-19

Project Manager: **David Lehmann**
Enviroclean-Altamira
2405 ECR 123
Midland, TX 79706

Reference: XENCO Report No(s): **640850**
Longfellow Energy
Project Address: State 20B

David Lehmann:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 640850. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 640850 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 640850

Enviroclean-Altamira, Midland, TX

Longfellow Energy

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-LS20-04, 2-3	S	10-22-19 10:11	2 - 3 ft	640850-001
SB-LS20-04, 3-4	S	10-22-19 10:13	3 - 4 ft	640850-002
SB-LS20-04, 5-6	S	10-22-19 10:15	5 - 6 ft	640850-004
SB-LS20-04, 6-7	S	10-22-19 10:17	6 - 7 ft	640850-005
Trip Blank	W	10-22-19 00:00		640850-009
SB-LP17-05, 1-2	S	10-22-19 09:32	1 - 2 ft	640850-010
SB-LS20-05, 2-3	S	10-22-19 09:33	2 - 3 ft	640850-011
SB-LS20-05, 3-4	S	10-22-19 09:33	3 - 4 ft	640850-012
Trip Blank	W	10-23-19 13:36		640850-019
SB-LS20-04, 4-5	S	10-22-19 00:00	4 - 5 ft	Not Analyzed
SB-LS20-04, 7-8	S	10-22-19 10:19	7 - 8 ft	Not Analyzed
SB-LS20-04, 8-9	S	10-22-19 10:23	8 - 9 ft	Not Analyzed
SB-LS20-04, 9-10	S	10-22-19 10:24	9 - 10 ft	Not Analyzed
SB-LS20-05, 4-5	S	10-22-19 09:33	4 - 5 ft	Not Analyzed
SB-LS20-05, 5-6	S	10-22-19 09:33	5 - 6 ft	Not Analyzed
SB-LS20-05, 6-7	S	10-22-19 09:33	6 - 7 ft	Not Analyzed
SB-LS20-05, 7-8	S	10-22-19 09:33	7 - 8 ft	Not Analyzed
SB-LS20-05, 8-9	S	10-22-19 09:33	8 - 9 ft	Not Analyzed
SB-LS20-05, 9-10	S	10-22-19 09:33	9 - 10 ft	Not Analyzed

CASE NARRATIVE

Client Name: Enviroclean-Altamira

Project Name: Longfellow Energy

Project ID: *LFECM 1901/ 1000*
Work Order Number(s): *640850*

Report Date: *30-OCT-19*
Date Received: *10/23/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3105453 BTEX by SW 8260C
Surrogate Dibromofluoromethane recovered above QC limits. This surrogate is not associated with target compounds. Samples affected are: 7688917-1-BKS,7688917-1-BSD.

CCV surrogate Dibromofluoromethane recovered above QC limits. This surrogate is not associated with target compounds.

Certificate of Analysis Summary 640850

Enviroclean-Altamira, Midland, TX

Project Name: Longfellow Energy

Project Id: LFECM 1901/ 1000
Contact: David Lehmann
Project Location: State 20B

Date Received in Lab: Wed Oct-23-19 01:36 pm
Report Date: 30-OCT-19
Project Manager: Jessica Kramer

Analysis Requested																					
	Lab Id:	640850-001		640850-002		640850-004		640850-005		640850-009		640850-010									
	Field Id:	SB-LS20-04, 2-3		SB-LS20-04, 3-4		SB-LS20-04, 5-6		SB-LS20-04, 6-7		Trip Blank		SB-LP17-05, 1-2									
	Depth:	2-3 ft		3-4 ft		5-6 ft		6-7 ft				1-2 ft									
	Matrix:	SOIL		SOIL		SOIL		SOIL		WATER		SOIL									
	Sampled:	Oct-22-19 10:11		Oct-22-19 10:13		Oct-22-19 10:15		Oct-22-19 10:17		Oct-22-19 00:00		Oct-22-19 09:32									
BTEX by SW 8260C SUB: T104704215-19-30	***Extracted:***	Oct-25-19 12:20		Oct-25-19 12:20		Oct-28-19 16:30		Oct-28-19 16:30		Oct-25-19 14:15		Oct-25-19 12:20									
	Analyzed:	Oct-25-19 19:45		Oct-25-19 20:49		Oct-29-19 02:49		Oct-29-19 03:10		Oct-25-19 15:03		Oct-25-19 20:06									
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/L	RL	mg/kg	RL								
Benzene		ND	0.00100	0.0470	0.0250	ND	0.00100	ND	0.000992	ND	0.00100	ND	0.000992								
Toluene		ND	0.00500	ND	0.125	ND	0.00501	ND	0.00496	ND	0.00100	ND	0.00496								
Ethylbenzene		ND	0.00100	4.84 D	0.0500	ND	0.00100	ND	0.000992	ND	0.00100	0.00600	0.000992								
m,p-Xylenes		ND	0.00200	6.70	0.0500	ND	0.00200	ND	0.00198	ND	0.0100	0.00725	0.00198								
o-Xylene		ND	0.00100	2.95	0.0250	ND	0.00100	ND	0.000992	ND	0.00100	0.0289	0.000992								
Total Xylenes		ND	0.00100	9.65	0.0250	ND	0.00100	ND	0.000992	ND	0.00100	0.0362	0.000992								
Total BTEX		ND	0.00100	14.5	0.0250	ND	0.00100	ND	0.000992	ND	0.00100	0.0422	0.000992								
Inorganic Anions by EPA 300 SUB: T104704400-19-19	***Extracted:***	Oct-25-19 15:45		Oct-25-19 15:45		Oct-28-19 16:00		Oct-29-19 13:30				Oct-25-19 15:45									
	Analyzed:	Oct-25-19 19:16		Oct-25-19 19:22		Oct-28-19 22:32		Oct-29-19 16:55				Oct-25-19 19:29									
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL								
Chloride		631	4.95	2580	25.2	1230	5.05	1060	5.00			3510	24.9								
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Oct-25-19 17:00		Oct-25-19 17:00		Oct-29-19 17:00		Oct-29-19 17:00				Oct-25-19 17:00									
	Analyzed:	Oct-26-19 02:25		Oct-26-19 08:48		Oct-30-19 01:50		Oct-30-19 02:11				Oct-26-19 03:07									
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		ND	50.0	354	49.9	ND	50.0	ND	49.9			ND	500								
Diesel Range Organics (DRO)		73.3	50.0	2090	49.9	916	50.0	104	49.9			15700	500								
Motor Oil Range Hydrocarbons (MRO)		ND	50.0	219	49.9	154	50.0	ND	49.9			2220	500								
Total TPH		73.3	50.0	2660	49.9	1070	50.0	104	49.9			17900	500								

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 640850

Enviroclean-Altamira, Midland, TX

Project Name: Longfellow Energy

Project Id: LFECM 1901/ 1000
Contact: David Lehmann
Project Location: State 20B

Date Received in Lab: Wed Oct-23-19 01:36 pm
Report Date: 30-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	640850-011		640850-012		640850-019							
	Field Id:	SB-LS20-05, 2-3		SB-LS20-05, 3-4		Trip Blank							
	Depth:	2-3 ft		3-4 ft									
	Matrix:	SOIL		SOIL		WATER							
	Sampled:	Oct-22-19 09:33		Oct-22-19 09:33		Oct-23-19 13:36							
BTEX by SW 8260C SUB: T104704215-19-30	***Extracted:***	Oct-25-19 12:20		Oct-28-19 16:30		Oct-25-19 14:15							
	Analyzed:	Oct-25-19 20:28		Oct-29-19 03:32		Oct-25-19 14:45							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/L	RL						
Benzene		ND	0.00100	ND	0.00101	ND	0.00100						
Toluene		ND	0.00502	ND	0.00503	ND	0.00100						
Ethylbenzene		ND	0.00100	ND	0.00101	ND	0.00100						
m,p-Xylenes		ND	0.00201	0.00280	0.00201	ND	0.0100						
o-Xylene		ND	0.00100	0.00126	0.00101	ND	0.00100						
Total Xylenes		ND	0.00100	0.00406	0.00101	ND	0.00100						
Total BTEX		ND	0.00100	0.00406	0.00101	ND	0.00100						
Inorganic Anions by EPA 300 SUB: T104704400-19-19	***Extracted:***	Oct-25-19 17:00		Oct-28-19 16:00									
	Analyzed:	Oct-25-19 19:20		Oct-28-19 22:37									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Chloride		3460	25.0	4780	25.3								
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Oct-25-19 17:00		Oct-29-19 17:00									
	Analyzed:	Oct-26-19 09:09		Oct-30-19 02:32									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		ND	50.0	ND	49.8								
Diesel Range Organics (DRO)		342	50.0	92.7	49.8								
Motor Oil Range Hydrocarbons (MRO)		108	50.0	ND	49.8								
Total TPH		450	50.0	92.7	49.8								

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105453 **Sample:** 640850-019 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 10/25/19 14:45

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0606	0.0500	121	75-131	
1,2-Dichloroethane-D4	0.0446	0.0500	89	63-144	
Toluene-D8	0.0559	0.0500	112	80-117	

Lab Batch #: 3105453 **Sample:** 640850-009 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 10/25/19 15:03

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0618	0.0500	124	75-131	
1,2-Dichloroethane-D4	0.0451	0.0500	90	63-144	
Toluene-D8	0.0511	0.0500	102	80-117	

Lab Batch #: 3105437 **Sample:** 640850-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 19:45

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0501	0.0500	100	53-142	
1,2-Dichloroethane-D4	0.0524	0.0500	105	53-150	
Toluene-D8	0.0512	0.0500	102	70-130	

Lab Batch #: 3105437 **Sample:** 640850-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 20:06

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0471	0.0500	94	53-142	
1,2-Dichloroethane-D4	0.0507	0.0500	101	53-150	
Toluene-D8	0.0615	0.0500	123	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105437 **Sample:** 640850-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 20:28

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0479	0.0500	96	53-142	
1,2-Dichloroethane-D4	0.0500	0.0500	100	53-150	
Toluene-D8	0.0534	0.0500	107	70-130	

Lab Batch #: 3105437 **Sample:** 640850-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 20:49

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0463	0.0500	93	53-142	
1,2-Dichloroethane-D4	0.0518	0.0500	104	53-150	
Toluene-D8	0.0594	0.0500	119	70-130	

Lab Batch #: 3105437 **Sample:** 640850-002 / DL **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 21:10

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0431	0.0500	86	53-142	
1,2-Dichloroethane-D4	0.0449	0.0500	90	53-150	
Toluene-D8	0.0586	0.0500	117	70-130	

Lab Batch #: 3105552 **Sample:** 640850-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/19 02:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.7	99.9	82	70-135	
o-Terphenyl	43.2	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105552 **Sample:** 640850-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/19 03:07

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.1	100	92	70-135	
o-Terphenyl	45.9	50.0	92	70-135	

Lab Batch #: 3105552 **Sample:** 640850-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/19 08:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.1	99.8	99	70-135	
o-Terphenyl	53.6	49.9	107	70-135	

Lab Batch #: 3105552 **Sample:** 640850-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/26/19 09:09

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.5	99.9	88	70-135	
o-Terphenyl	43.3	50.0	87	70-135	

Lab Batch #: 3105726 **Sample:** 640850-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/29/19 02:49

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0511	0.0500	102	53-142	
1,2-Dichloroethane-D4	0.0515	0.0500	103	53-150	
Toluene-D8	0.0552	0.0500	110	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105726 **Sample:** 640850-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/29/19 03:10

SURROGATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0495	0.0500	99	53-142	
1,2-Dichloroethane-D4	0.0508	0.0500	102	53-150	
Toluene-D8	0.0509	0.0500	102	70-130	

Lab Batch #: 3105726 **Sample:** 640850-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/29/19 03:32

SURROGATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0564	0.0500	113	53-142	
1,2-Dichloroethane-D4	0.0554	0.0500	111	53-150	
Toluene-D8	0.0580	0.0500	116	70-130	

Lab Batch #: 3105836 **Sample:** 640850-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/30/19 01:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	99.9	93	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 3105836 **Sample:** 640850-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/30/19 02:11

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.4	99.7	97	70-135	
o-Terphenyl	50.9	49.9	102	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105836 **Sample:** 640850-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/30/19 02:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	99.6	94	70-135	
o-Terphenyl	48.7	49.8	98	70-135	

Lab Batch #: 3105453 **Sample:** 7688917-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 10/25/19 12:22

SURROGATE RECOVERY STUDY

BTEX by SW 8260C

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0639	0.0500	128	75-131	
1,2-Dichloroethane-D4	0.0469	0.0500	94	63-144	
Toluene-D8	0.0531	0.0500	106	80-117	

Lab Batch #: 3105437 **Sample:** 7688910-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/19 13:36

SURROGATE RECOVERY STUDY

BTEX by SW 8260C

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0484	0.0500	97	53-142	
1,2-Dichloroethane-D4	0.0496	0.0500	99	53-150	
Toluene-D8	0.0509	0.0500	102	70-130	

Lab Batch #: 3105552 **Sample:** 7688965-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/19 20:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.7	100	86	70-135	
o-Terphenyl	45.7	50.0	91	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105726 **Sample:** 7689128-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/29/19 02:06

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0489	0.0500	98	53-142	
1,2-Dichloroethane-D4	0.0514	0.0500	103	53-150	
Toluene-D8	0.0525	0.0500	105	70-130	

Lab Batch #: 3105836 **Sample:** 7689180-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/29/19 21:39

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	49.1	50.0	98	70-135	

Lab Batch #: 3105453 **Sample:** 7688917-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 10/25/19 10:48

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0689	0.0500	138	75-131	**
1,2-Dichloroethane-D4	0.0555	0.0500	111	63-144	
Toluene-D8	0.0458	0.0500	92	80-117	

Lab Batch #: 3105437 **Sample:** 7688910-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/19 12:12

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0485	0.0500	97	53-142	
1,2-Dichloroethane-D4	0.0500	0.0500	100	53-150	
Toluene-D8	0.0528	0.0500	106	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105552 **Sample:** 7688965-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/19 20:31

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.8	100	87	70-135	
o-Terphenyl	45.1	50.0	90	70-135	

Lab Batch #: 3105726 **Sample:** 7689128-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/28/19 23:38

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0479	0.0500	96	53-142	
1,2-Dichloroethane-D4	0.0484	0.0500	97	53-150	
Toluene-D8	0.0507	0.0500	101	70-130	

Lab Batch #: 3105836 **Sample:** 7689180-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/29/19 22:00

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.7	100	86	70-135	
o-Terphenyl	43.2	50.0	86	70-135	

Lab Batch #: 3105453 **Sample:** 7688917-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 10/25/19 11:06

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0671	0.0500	134	75-131	**
1,2-Dichloroethane-D4	0.0485	0.0500	97	63-144	
Toluene-D8	0.0467	0.0500	93	80-117	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105437 **Sample:** 7688910-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/19 12:33

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0490	0.0500	98	53-142	
1,2-Dichloroethane-D4	0.0495	0.0500	99	53-150	
Toluene-D8	0.0533	0.0500	107	70-130	

Lab Batch #: 3105552 **Sample:** 7688965-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/25/19 20:52

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 3105726 **Sample:** 7689128-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/28/19 23:59

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0487	0.0500	97	53-142	
1,2-Dichloroethane-D4	0.0493	0.0500	99	53-150	
Toluene-D8	0.0500	0.0500	100	70-130	

Lab Batch #: 3105836 **Sample:** 7689180-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/29/19 22:21

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	100	85	70-135	
o-Terphenyl	43.1	50.0	86	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105453 **Sample:** 640980-001 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 10/25/19 11:28

SURROGATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0622	0.0500	124	75-131	
1,2-Dichloroethane-D4	0.0552	0.0500	110	63-144	
Toluene-D8	0.0459	0.0500	92	80-117	

Lab Batch #: 3105437 **Sample:** 640840-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 15:32

SURROGATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0489	0.0500	98	53-142	
1,2-Dichloroethane-D4	0.0480	0.0500	96	53-150	
Toluene-D8	0.0545	0.0500	109	70-130	

Lab Batch #: 3105552 **Sample:** 640878-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 21:33

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.6	99.7	90	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 3105726 **Sample:** 640878-053 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/29/19 00:21

SURROGATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0496	0.0500	99	53-142	
1,2-Dichloroethane-D4	0.0502	0.0500	100	53-150	
Toluene-D8	0.0506	0.0500	101	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105836 **Sample:** 641244-022 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/29/19 23:03

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	99.9	90	70-135	
o-Terphenyl	45.4	50.0	91	70-135	

Lab Batch #: 3105437 **Sample:** 640840-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 15:53

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0501	0.0500	100	53-142	
1,2-Dichloroethane-D4	0.0495	0.0500	99	53-150	
Toluene-D8	0.0538	0.0500	108	70-130	

Lab Batch #: 3105552 **Sample:** 640878-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/25/19 21:54

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	99.6	96	70-135	
o-Terphenyl	52.6	49.8	106	70-135	

Lab Batch #: 3105726 **Sample:** 640878-053 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/29/19 10:23

BTEX by SW 8260C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0481	0.0500	96	53-142	
1,2-Dichloroethane-D4	0.0494	0.0500	99	53-150	
Toluene-D8	0.0505	0.0500	101	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Longfellow Energy

Work Orders : 640850, **Project ID:** LFECM 1901/ 1000

Lab Batch #: 3105836 **Sample:** 641244-022 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/29/19 23:25

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	100	92	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Version: 1.%

BS / BSD Recoveries

Project Name: Longfellow Energy

Work Order #: 640850 **Project ID:** LFECM 1901/ 1000

Analyst: CRL **Date Prepared:** 10/25/2019 **Date Analyzed:** 10/25/2019

Lab Batch ID: 3105437 **Sample:** 7688910-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.0500	0.0348	70	0.0500	0.0443	89	24	62-132	25	
Toluene	<0.00500	0.0500	0.0360	72	0.0500	0.0463	93	25	66-124	25	
Ethylbenzene	<0.00100	0.0500	0.0367	73	0.0500	0.0470	94	25	71-134	25	
m,p-Xylenes	<0.00200	0.100	0.0731	73	0.100	0.0937	94	25	69-128	25	
o-Xylene	<0.00100	0.0500	0.0374	75	0.0500	0.0479	96	25	72-131	25	

Analyst: SAD **Date Prepared:** 10/28/2019 **Date Analyzed:** 10/28/2019

Lab Batch ID: 3105726 **Sample:** 7689128-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.0500	0.0421	84	0.0500	0.0427	85	1	62-132	25	
Toluene	<0.00500	0.0500	0.0429	86	0.0500	0.0421	84	2	66-124	25	
Ethylbenzene	<0.00100	0.0500	0.0435	87	0.0500	0.0424	85	3	71-134	25	
m,p-Xylenes	<0.00200	0.100	0.0878	88	0.100	0.0851	85	3	69-128	25	
o-Xylene	<0.00100	0.0500	0.0454	91	0.0500	0.0448	90	1	72-131	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

BS / BSD Recoveries

Project Name: Longfellow Energy

Work Order #: 640850 **Project ID:** LFECM 1901/ 1000

Analyst: KRP **Date Prepared:** 10/25/2019 **Date Analyzed:** 10/25/2019

Lab Batch ID: 3105453 **Sample:** 7688917-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.0500	0.0503	101	0.0500	0.0463	93	8	66-142	20	
Toluene	<0.00100	0.0500	0.0393	79	0.0500	0.0371	74	6	59-139	20	
Ethylbenzene	<0.00100	0.0500	0.0446	89	0.0500	0.0409	82	9	75-125	20	
m,p-Xylenes	<0.0100	0.100	0.0814	81	0.100	0.0765	77	6	75-125	20	
o-Xylene	<0.00100	0.0500	0.0432	86	0.0500	0.0400	80	8	75-125	20	

Analyst: CHE **Date Prepared:** 10/25/2019 **Date Analyzed:** 10/25/2019

Lab Batch ID: 3105523 **Sample:** 7688928-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	256	102	250	256	102	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

BS / BSD Recoveries

Project Name: Longfellow Energy

Work Order #: 640850 **Project ID:** LFECM 1901/ 1000

Analyst: CHE **Date Prepared:** 10/25/2019 **Date Analyzed:** 10/25/2019

Lab Batch ID: 3105527 **Sample:** 7688957-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	261	104	250	263	105	1	90-110	20	

Analyst: CHE **Date Prepared:** 10/28/2019 **Date Analyzed:** 10/28/2019

Lab Batch ID: 3105667 **Sample:** 7689058-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<5.00	250	265	106	250	266	106	0	90-110	20	

Analyst: SPC **Date Prepared:** 10/29/2019 **Date Analyzed:** 10/29/2019

Lab Batch ID: 3105847 **Sample:** 7689138-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	244	98	250	244	98	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

BS / BSD Recoveries

Project Name: Longfellow Energy

Work Order #: 640850 **Project ID:** LFECM 1901/ 1000

Analyst: ARM **Date Prepared:** 10/25/2019 **Date Analyzed:** 10/25/2019

Lab Batch ID: 3105552 **Sample:** 7688965-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	840	84	1000	826	83	2	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	864	86	1000	862	86	0	70-135	20	

Analyst: ARM **Date Prepared:** 10/29/2019 **Date Analyzed:** 10/29/2019

Lab Batch ID: 3105836 **Sample:** 7689180-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	885	89	1000	857	86	3	70-135	20	
Diesel Range Organics (DRO)	<15.0	1000	948	95	1000	910	91	4	70-135	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Version: 1.%

Form 3 - MS Recoveries

Project Name: Longfellow Energy

Work Order #: 640850

Lab Batch #: 3105453 **Project ID:** LFECM 1901/ 1000

Date Analyzed: 10/25/2019 **Date Prepared:** 10/25/2019 **Analyst:** KRP

QC- Sample ID: 640980-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

BTEX by SW 8260C	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Benzene	0.000850	0.0500	0.0495	97	66-142	
Toluene	<0.000500	0.0500	0.0375	75	59-139	
Ethylbenzene	<0.00100	0.0500	0.0431	86	75-125	
m,p-Xylenes	<0.0100	0.100	0.0799	80	75-125	
o-Xylene	<0.00100	0.0500	0.0433	87	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: Longfellow Energy

Work Order # : 640850 **Project ID:** LFECM 1901/ 1000

Lab Batch ID: 3105437 **QC- Sample ID:** 640840-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/25/2019 **Date Prepared:** 10/25/2019 **Analyst:** CRL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0518	4.28	3.70	85	4.28	3.86	89	4	62-132	25	
Toluene	<0.0856	4.28	3.83	89	4.28	4.01	94	5	66-124	25	
Ethylbenzene	6.68	4.28	10.0	78	4.28	10.2	82	2	71-134	25	
m,p-Xylenes	0.115	8.56	7.73	89	8.56	7.94	91	3	69-128	25	
o-Xylene	<0.0856	4.28	3.91	91	4.28	4.06	95	4	72-131	25	

Lab Batch ID: 3105726 **QC- Sample ID:** 640878-053 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/29/2019 **Date Prepared:** 10/28/2019 **Analyst:** SAD

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260C Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00101	0.0503	0.0416	83	0.0505	0.0473	94	13	62-132	25	
Toluene	<0.00503	0.0503	0.0412	82	0.0505	0.0481	95	15	66-124	25	
Ethylbenzene	<0.000338	0.0503	0.0414	82	0.0505	0.0485	96	16	71-134	25	
m,p-Xylenes	<0.000439	0.101	0.0828	82	0.101	0.0972	96	16	69-128	25	
o-Xylene	<0.000991	0.0503	0.0425	84	0.0505	0.0493	98	15	72-131	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Longfellow Energy

Work Order # : 640850 **Project ID:** LFECM 1901/ 1000

Lab Batch ID: 3105523 **QC- Sample ID:** 640965-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/25/2019 **Date Prepared:** 10/25/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	74.2	252	353	111	252	348	109	1	90-110	20	X

Lab Batch ID: 3105523 **QC- Sample ID:** 640971-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/25/2019 **Date Prepared:** 10/25/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	170	253	433	104	253	435	105	0	90-110	20	

Lab Batch ID: 3105527 **QC- Sample ID:** 641073-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/25/2019 **Date Prepared:** 10/25/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	1200	202	1410	104	202	1410	104	0	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Longfellow Energy

Work Order # : 640850 **Project ID:** LFECM 1901/ 1000

Lab Batch ID: 3105527 **QC- Sample ID:** 641083-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/25/2019 **Date Prepared:** 10/25/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	17.7	248	285	108	248	286	108	0	90-110	20	

Lab Batch ID: 3105667 **QC- Sample ID:** 640597-035 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/28/2019 **Date Prepared:** 10/28/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	67.6	249	312	98	249	313	99	0	90-110	20	

Lab Batch ID: 3105667 **QC- Sample ID:** 641232-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/28/2019 **Date Prepared:** 10/28/2019 **Analyst:** CHE

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	2.12	199	203	101	199	203	101	0	90-110	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Longfellow Energy

Work Order # : 640850 **Project ID:** LFECM 1901/ 1000

Lab Batch ID: 3105847 **QC- Sample ID:** 640749-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/29/2019 **Date Prepared:** 10/29/2019 **Analyst:** SPC

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	302	252	550	98	252	552	99	0	90-110	20	

Lab Batch ID: 3105847 **QC- Sample ID:** 640878-013 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/29/2019 **Date Prepared:** 10/29/2019 **Analyst:** SPC

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	128	249	374	99	249	375	99	0	90-110	20	

Lab Batch ID: 3105552 **QC- Sample ID:** 640878-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/25/2019 **Date Prepared:** 10/25/2019 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	18.8	997	851	83	996	850	83	0	70-135	20	
Diesel Range Organics (DRO)	975	997	2140	117	996	2130	116	0	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Longfellow Energy

Work Order # : 640850 **Project ID:** LFECM 1901/ 1000

Lab Batch ID: 3105836 **QC- Sample ID:** 641244-022 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/29/2019 **Date Prepared:** 10/29/2019 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	936	94	1000	974	97	4	70-135	20	
Diesel Range Organics (DRO)	161	999	1190	103	1000	1220	106	2	70-135	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 640850

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Project Manager:	David Lehman	Bill to: (if different)	Heather Tiffany
Company Name:	Altamira	Company Name:	Altamira
Address:	2405 E. County Road 123	Address:	3700 W. Robinson St. Suite 200
City, State ZIP:	Midland, TX 79706	City, State ZIP:	Norman, Ok 73072
Phone:	405-618-2021	Email:	David.Lehmann@Altamira-us.com; Heather.Tiffany@Altamira-us.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Longfellow Energy	Turn Around	
Project Number:	LFECM1901 / 1000	Routine:	☐
Project Location	State 20B	Rush:	■
Sampler's Name:	Jordan Powell	Due Date:	
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.8	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	[illegible]

Preservative Codes

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

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride (300) (5 day)	TPH (8015) (5 day)	BTEX (8260B) (5 day)	Sample Comments
SB-LS20-04, 2-3	Solid	10/22/19	10:11 am	2-3		x	x	x	5 Day TAT
SB-LS20-04, 3-4	Solid	10/22/19	10:13am	3-4		x	x	x	5 Day TAT
SB-LS20-04, 4-5	Solid	10/22/19	—	4-5		x	x	x	5 Day TAT
SB-LS20-04, 5-6	Solid	10/22/19	10:15 am	5-6		x	x	x	HOLD
SB-LS20-04, 6-7	Solid	10/22/19	10:17am	6-7		x	x	x	HOLD
SB-LS20-04, 7-8	Solid	10/22/19	10:19am	7-8		x	x	x	HOLD
SB-LS20-04, 8-9	Solid	10/22/19	10:23am	8-9		x	x	x	HOLD
SB-LS20-04, 9-10	Solid	10/22/19	10:24am	9-10		x	x	x	HOLD
Trip Blank	Water			---				x	HOLD

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 [signature]	[signature]	10/23/19 13:34	2		
3			4		
5			6		

Revised Date101419 Rev. 2019.1

Chain of Custody

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

Work Order No: 640850

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Project Manager:	David Lehman	Bill to: (if different)	Heather Tiffany
Company Name:	Altamira	Company Name:	Altamira
Address:	2405 E. County Road 123	Address:	3700 W. Robinson St. Suite 200
City, State ZIP:	Midland, TX 79706	City, State ZIP:	Norman, Ok 73072
Phone:	405-618-2021	Email:	David.Lehmann@Altamira-us.com; Heather.Tiffany@Altamira-us.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Longfellow Energy	Turn Around	
Project Number:	LFECM1901 / 1000	Routine:	☐
Project Location	State 20B	Rush:	■
Sampler's Name:	Jordan Powell	Due Date:	
PO #:			

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride (300)	TPH (8015)	BTEX (8260B)	Sample Comments
SB-LP17-05, 1-2	Solid	10/22/19	9:32 am	1-2		x	x	x	5 Day TAT
SB-LS20-05, 2-3	Solid	10/22/19	9:33 am	2-3		x	x	x	5 Day TAT
SB-LS20-05, 3-4	Solid	10/22/19	9:34 am	3-4		x	x	x	HOLD
SB-LS20-05, 4-5	Solid	10/22/19	—	4-5		x	x	x	HOLD
SB-LS20-05, 5-6	Solid	10/22/19	—	5-6		x	x	x	HOLD
SB-LS20-05, 6-7	Solid	10/22/19	—	6-7		x	x	x	HOLD
SB-LS20-05, 7-8	Solid	10/22/19	9:45 am	7-8		x	x	x	HOLD
SB-LS20-05, 8-9	Solid	10/22/19	9:47 am	8-9		x	x	x	HOLD
SB-LS20-05, 9-10	Solid	10/22/19	9:48 am	9-10		x	x	x	HOLD
Trip Blank				—				X	

ANALYSIS REQUEST

Preservative Codes

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

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

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Jordan Powell		10/23/19 13:36	2		
3			4		
5			6		

Revised Date101419 Rev. 2019.1

Inter-Office Shipment

IOS Number **50797**

Date/Time: 10/24/19 14:24

Created by: Elizabeth Mcclellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776810437200

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640850-001	S	SB-LS20-04, 2-3	10/22/19 10:11	E300	Inorganic Anions by EPA 300	10/29/19	11/19/19	JKR	CL	
640850-001	S	SB-LS20-04, 2-3	10/22/19 10:11	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-002	S	SB-LS20-04, 3-4	10/22/19 10:13	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-002	S	SB-LS20-04, 3-4	10/22/19 10:13	E300	Inorganic Anions by EPA 300	10/29/19	11/19/19	JKR	CL	
640850-003	S	SB-LS20-04, 4-5	10/22/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-003	S	SB-LS20-04, 4-5	10/22/19 00:00	E300	Inorganic Anions by EPA 300	11/01/19	11/19/19	JKR	CL	
640850-004	S	SB-LS20-04, 5-6	10/22/19 10:15	E300	Inorganic Anions by EPA 300	11/01/19	11/19/19	JKR	CL	
640850-004	S	SB-LS20-04, 5-6	10/22/19 10:15	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-005	S	SB-LS20-04, 6-7	10/22/19 10:17	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-005	S	SB-LS20-04, 6-7	10/22/19 10:17	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-006	S	SB-LS20-04, 7-8	10/22/19 10:19	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-006	S	SB-LS20-04, 7-8	10/22/19 10:19	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-007	S	SB-LS20-04, 8-9	10/22/19 10:23	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-007	S	SB-LS20-04, 8-9	10/22/19 10:23	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-008	S	SB-LS20-04, 9-10	10/22/19 10:24	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-008	S	SB-LS20-04, 9-10	10/22/19 10:24	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-010	S	SB-LP17-05, 1-2	10/22/19 09:32	E300	Inorganic Anions by EPA 300	10/29/19	11/19/19	JKR	CL	
640850-010	S	SB-LP17-05, 1-2	10/22/19 09:32	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-011	S	SB-LS20-05, 2-3	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-011	S	SB-LS20-05, 2-3	10/22/19 09:33	E300	Inorganic Anions by EPA 300	10/29/19	11/19/19	JKR	CL	
640850-012	S	SB-LS20-05, 3-4	10/22/19 09:33	E300	Inorganic Anions by EPA 300	11/01/19	11/19/19	JKR	CL	
640850-012	S	SB-LS20-05, 3-4	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	10/29/19	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-013	S	SB-LS20-05, 4-5	10/22/19 09:33	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-013	S	SB-LS20-05, 4-5	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-014	S	SB-LS20-05, 5-6	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	

Inter-Office Shipment

IOS Number **50797**

Date/Time: 10/24/19 14:24

Lab# From: **Carlsbad**

Lab# To: **Midland**

Created by: Elizabeth Mcclellan

Delivery Priority:

Air Bill No.: 776810437200

Please send report to: Jessica Kramer

Address: 1089 N Canal Street

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640850-014	S	SB-LS20-05, 5-6	10/22/19 09:33	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-015	S	SB-LS20-05, 6-7	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-015	S	SB-LS20-05, 6-7	10/22/19 09:33	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-016	S	SB-LS20-05, 7-8	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-016	S	SB-LS20-05, 7-8	10/22/19 09:33	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-017	S	SB-LS20-05, 8-9	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-017	S	SB-LS20-05, 8-9	10/22/19 09:33	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	
640850-018	S	SB-LS20-05, 9-10	10/22/19 09:33	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	11/05/19	JKR	PHCC10C28 PHCC28C35	
640850-018	S	SB-LS20-05, 9-10	10/22/19 09:33	E300	Inorganic Anions by EPA 300	HOLD	11/19/19	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer

Jessica Kramer

Date Relinquished: 10/24/2019

Received By: Jessica Kramer

Jessica Kramer

Date Received: 10/25/2019 11:36

Cooler Temperature: 0.1

Inter-Office Shipment

IOS Number **50798**

Date/Time: 10/24/19 14:24
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Houston**
Air Bill No.: 776810071558
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
640850-001	S	SB-LS20-04, 2-3	10/22/19 10:11	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-002	S	SB-LS20-04, 3-4	10/22/19 10:13	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-003	S	SB-LS20-04, 4-5	10/22/19 00:00	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-004	S	SB-LS20-04, 5-6	10/22/19 10:15	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-005	S	SB-LS20-04, 6-7	10/22/19 10:17	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-006	S	SB-LS20-04, 7-8	10/22/19 10:19	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-007	S	SB-LS20-04, 8-9	10/22/19 10:23	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-008	S	SB-LS20-04, 9-10	10/22/19 10:24	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-009	W	Trip Blank	10/22/19 00:00	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-010	S	SB-LP17-05, 1-2	10/22/19 09:32	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-011	S	SB-LS20-05, 2-3	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-012	S	SB-LS20-05, 3-4	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-013	S	SB-LS20-05, 4-5	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-014	S	SB-LS20-05, 5-6	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-015	S	SB-LS20-05, 6-7	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-016	S	SB-LS20-05, 7-8	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-017	S	SB-LS20-05, 8-9	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-018	S	SB-LS20-05, 9-10	10/22/19 09:33	SW8260CBTEX	BTEX by SW 8260C	HOLD	11/05/19	JKR	BZ BZME EBZ XYLENES	
640850-019	W	Trip Blank	10/23/19 13:36	SW8260CBTEX	BTEX by SW 8260C	10/29/19	11/06/19	JKR	BZ BZME EBZ XYLENES	

Inter Office Shipment or Sample Comments:

Missing samples 13 & 14

Relinquished By: Jessica Kramer
Jessica Kramer

Received By: Ashly Kowalski

Date Relinquished: 10/24/2019

Date Received: 10/25/2019 10:00

Cooler Temperature: 4.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 50797

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 10/24/2019 02:24 PM

Received By: Brianna Teel **Date Received:** 10/25/2019 11:36 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Jessica Kramer Date: 10/25/2019

Jessica Kramer

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 50798

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : HOU-068

Sent By: Elizabeth McClellan **Date Sent:** 10.24.2019 02.24 PM

Received By: Ashly Kowalski **Date Received:** 10.25.2019 10.00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	4.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

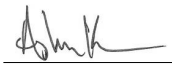
*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by:  Date: 10.25.2019

Ashly Kowalski

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Enviroclean-Altamira

Date/ Time Received: 10/23/2019 01:36:00 PM

Work Order #: 640850

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**Yes**	Samples 003,013,014, 015 are missing.
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	BTEX subbed to Houston. TPH and Cl to Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 10/24/2019

Checklist reviewed by: Jessica Kramer Date: 10/24/2019