Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2116660324
District RP	
Facility ID	
Application ID	

Closure

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

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

☑ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☑ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☑ 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: Halie Butler Title: Sr. Corporate Compliance and Enviromental Manager

Signature: HButler Date: 6/10/2022

Email: hbutler@selectenergy.com Telephone: 281-467-3153

OCD Only

Received by: Robert Hamlet Date: 6/17/2022

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: Robert Hamlet Date: 6/17/2022

Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

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	NAPP2116660324
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Select Energy Services	OGRID 289068
Contact Name Halie Butler	Contact Telephone 281-467-3153
Contact email hbutler@selectenergy.com	Incident # *(assigned by OCD)* NAPP2116660324
Contact mailing address P.O. Box 1715 Gainesville, TX 76241	

Location of Release Source

Latitude 33.00833 Longitude -103.99804
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mack PW	Site Type off-site
Date Release Discovered 6/14/2021	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
B	23	15 S	29 E	Chaves

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) 571	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☑ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
Water transfer line rupture

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2116660324
District RP	
Facility ID	
Application ID	

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? Volume of released fluid greater than greater than 25 bbls.

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

NMOCD recieved Notice of Release on 6/15/2021

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: Halie Butler
Title: Sr. Corporate Compliance and Enviromental Manager
Signature: HButler
Date: 6/10/2022
email: hbutler@selectenergy.com
Telephone: 281-467-3153

OCD Only

Received by: _____ Date: _____

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Site Name Mack PW	Site Type off-site
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Unit Letter	Section	Township	Range	County
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Printed Name: Halie Butler
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Date: 6/10/2022
email: hbutler@selectenergy.com
Telephone: 281-467-3153

OCD Only

Received by: _____ Date: _____

Incident ID	NAPP2116660324
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	>115 (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.

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Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2116660324
District RP	
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Printed Name: Halie Butler Title: Sr. Corporate Compliance and Enviromental Manager

Signature: H Butler Date: 6/10/2022

Email: hbutler@selectenergy.com Telephone: 281-467-3153

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAPP2116660324
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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.

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Printed Name: Halie Butler Title: Sr. Corporate Compliance and Enviromental Manager

Signature: HButler Date: 6/10/2022

Email: hbutler@selectenergy.com Telephone: 281-467-3153

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	NAPP2116660324
District RP	
Facility ID	
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Closure

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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

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☑ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☑ Description of remediation activities

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Printed Name: Halie Butler Title: Sr. Corporate Compliance and Enviromental Manager

Signature: HButler Date: 6/10/2022

Email: hbutler@selectenergy.com Telephone: 281-467-3153

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Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

NAPP2116660324
DELINEATION AND REMEDIATION REPORT
Mack PW
Produced Water Release
Chaves County, New Mexico

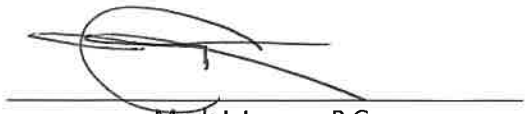
Latitude: 33.00833
Longitude: -103.99804

LAI Project No. 21-0105-04

June 10, 2022

Prepared for:
Select Energy Services
5721 NW 132nd Street
Oklahoma City, OK 73142

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 202
Midland, Texas 79701



Mark J. Larson, P.G.
Certified Professional Geologist #10490

Daniel St. Germain
Staff Geologist

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Contents

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Appendix B	NMOCD Communications
Appendix C	Karst Potential Map
Appendix D	Boring Log
Appendix E	Laboratory Reports
Appendix F	Photographic Documentation

1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this delineation and remediation report on behalf of Select Energy Services, LLC. (Select) for submittal to the New Mexico Oil Conservation Division (NMOCD) District 2 for a produced water spill at Mack PW (Site) located in Unit B (NW/4, NE/4), Section 23, Township 15 South, Range 29 East in Chaves County, New Mexico. The geodetic position is North 33.00833° and West -103.99804°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release occurred on June 14, 2021, from a water transfer line rupture during a freshwater - produced water changeover for Mack Energy Corporation (Mack). Approximately 150 barrels (bbls) of produced water was released over an area of about 12,103 square feet (0.28 acres) onto land owned by the United State Government and managed by the Bureau of Land Management (BLM). The release is considered a major release due to the volume of fluid released. No fluid was recovered. On June 15, 2021, Select submitted the initial C-141 to NMOCD District 2 and assigned an incident tracking number NAPP2116660324. Appendix A presents the initial C-141. Appendix B presents NMOCD communications.

1.2 Physical Setting

The physical setting is as follows:

- Surface elevation is approximately 3,920 feet above mean sea level (msl).
- Surface topography slopes gently towards the southeast.
- No surface water features are located within 1,000 feet of the site.
- Site is located outside of karst risk potential zones.
- Soils are designated as Berino-Cacique association, where the Berino soil consists of 1 inch of fine sandy loam, underlain by about 59 inches of sandy loam. Cacique soil consists of 16 inches of fine sand, underlain by 13 inches of sandy clay loam and cemented material (caliche), in descending order.
- The surface geology is older alluvial deposits on upland plains and piedmont areas, and calcic soils and eolian cover sediments of the High Plains region.
- Groundwater is greater than 115 feet below ground surface (bgs), based on a soil boring (BH-1) drilled to approximately 115 bgs on October 6, 2021, and gauged for depth to groundwater (dry) after 72 hours after drilling.

Appendix C presents the karst potential map. Appendix D presents the boring log for BH-1.

1.3 Remediation Levels

The following remediation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC:

- Benzene 10 mg/Kg
- BTEX 50 mg/Kg

- TPH 2,500 mg/Kg
- Chloride 20,000 mg/Kg

Further, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

2.0 DELINEATION

On June 15, 2021, LAI personnel used stainless-steel hand augers to collect samples from thirteen (13) samples locations (S-1 through S-13) inside of the spill area and four (4) sample locations (S-14 through S-17) in each cardinal direction of the spill area. Samples were collected at 0.5 and 1 foot below ground surfaces (bgs) at locations inside of the spill area and from 0.5-foot bgs at locations outside of the spill area. The samples were delivered under chain of custody and preservation to Permian Basin Environmental Laboratory (PBEL), a National Environmental Laboratory Accreditation Conference (NELAC) accredited laboratory, located in Midland, Texas. PBEL analyzed the samples for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA SW-846 Method 8021B; total petroleum hydrocarbons (TPH), including gasoline range organics (GRO), diesel range organics (DRO), and oil range organics (ORO) by Method 8015M, and chloride by Method 300.

Benzene, BTEX, and TPH were reported below the NMOCD closure criteria of (19.15.29 NMAC Table 1) of 10 milligrams per kilogram (mg/Kg), 50 mg/Kg, and 100 mg/Kg, in all samples, respectively. Chloride was reported above the NMOCD delineation limit of 600 mg/Kg in the following samples from the upper four (4) feet of soil:

Sample ID	Depth (ft)	Cl^- (mg/Kg)	Sample ID	Depth (ft)	Cl^- (mg/Kg)
S-1	0.5	6,620	S-8	0.5	11,200
S-1	1	4,730	S-8	1	12,100
S-2	0.5	10,700	S-9	0.5	9,640
S-2	1	11,400	S-9	1	9,500
S-3	0.5	9,870	S-10	0.5	11,300
S-3	1	11,000	S-10	1	12,400
S-4	0.5	10,400	S-11	0.5	9,610
S-4	1	12,200	S-11	1	1,370
S-5	0.5	11,900	S-12	0.5	10,600
S-5	1	11,300	S-12	1	10,700
S-6	0.5	11,700	S-13	0.5	6,010
S-6	1	11,400	S-13	1	7,140
S-7	0.5	11,900	--	--	--
S-7	1	7,680	--	--	--

On July 28 and 29, 2021, LAI personnel used a Geoprobe 7822® direct push rig to further delineate chloride at the thirteen (13) sample locations. Samples were collected at one (1), three (3), five (5), and ten (10) feet bgs, depending on subsurface conditions. The samples were delivered under chain of custody and

preservation to PBEL, which analyzed the samples for BTEX, TPH, and chloride. Laboratory results demonstrate that the release was fully delineated according to Table 1 of 19.15.29 NMAC for groundwater greater 100 feet bgs. Table 1 presents a summary of delineation analytical results. Figure 3 presents an aerial map with delineation sample locations. Appendix B presents the laboratory reports.

3.0 REMEDIATION

Prior to October 18, 2021, P2 Construction, Inc. (P2) under supervision from LAI began excavating soil from the release. Excavated soil was stored on plastic on the production pad south of the spill area. On October 18, 2021, LAI personnel collected 126 composite confirmation soil samples for every 200 square feet from the bottom (B-1 through B-78) and sidewalls (SW-1 through SW-48) of the excavation. PBEL analyzed the samples for BTEX, TPH, and chloride, and reported concentrations for benzene, BTEX and TPH in all samples below NMOCD closure criteria. Chloride concentrations were reported above the NMOCD criteria in the following forty-eight (48) samples:

Sample	Position	Depth (ft)	Cl^- (mg/Kg)	Sample	Position	Depth (ft)	Cl^- (mg/Kg)
B-29	Bottom	4.1	20,800	SW-23	Sidewall	0-4.1	9,000
B-38	Bottom	4.1	24,300	SW-24	Sidewall	0-4.1	12,800
SW-1	Sidewall	0-4.1	1,080	SW-25	Sidewall	0-4.1	9,190
SW-2	Sidewall	0-4.1	8,540	SW-28	Sidewall	0-4.1	650
SW-3	Sidewall	0-4.1	19,400	SW-29	Sidewall	0-4.1	2,430
SW-4	Sidewall	0-4.1	22,800	SW-30	Sidewall	0-4.1	913
SW-5	Sidewall	0-4.1	8,780	SW-31	Sidewall	0-4.1	678
SW-6	Sidewall	0-4.1	4,630	SW-32	Sidewall	0-4.1	990
SW-7	Sidewall	0-4.1	6,880	SW-33	Sidewall	0-4.1	4,960
SW-8	Sidewall	0-4.1	22,000	SW-34	Sidewall	0-4.1	3,110
SW-9	Sidewall	0-4.1	9,610	SW-35	Sidewall	0-4.1	2,860
SW-10	Sidewall	0-4.1	12,900	SW-36	Sidewall	0-4.1	2,340
SW-11	Sidewall	0-4.1	12,200	SW-37	Sidewall	0-4.1	1,780
SW-12	Sidewall	0-4.1	5,570	SW-38	Sidewall	0-4.1	7,650
SW-13	Sidewall	0-4.1	12,800	SW-39	Sidewall	0-4.1	4,900
SW-14	Sidewall	0-4.1	43,500	SW-40	Sidewall	0-4.1	25,900
SW-15	Sidewall	0-4.1	29,600	SW-41	Sidewall	0-4.1	8,160
SW-16	Sidewall	0-4.1	14,400	SW-42	Sidewall	0-4.1	9,060
SW-17	Sidewall	0-4.1	9,280	SW-43	Sidewall	0-4.1	7,000
SW-18	Sidewall	0-4.1	8,580	SW-44	Sidewall	0-4.1	24,200
SW-19	Sidewall	0-4.1	15,800	SW-45	Sidewall	0-4.1	15,900
SW-20	Sidewall	0-4.1	3,900	SW-46	Sidewall	0-4.1	7,850
SW-21	Sidewall	0-4.1	5,460	SW-47	Sidewall	0-4.1	6,370
SW-22	Sidewall	0-4.1	8,550	SW-48	Sidewall	0-4.1	1,400

Between November 9 and 17, 2021, LAI personnel collected twenty-three (23) samples composite soil samples where additional excavation was performed due to chloride being above NMOCD closure criteria. The resampled areas included B-29, B-38, SW-1, SW-3, SW-4, SW-9, SW-15, SW-16, SW-17, SW-18, SW-19, SW-20, SW-21, SW-30, SW-31, SW-32, SW-33, SW-35, SW-36, SW-37, SW-40, SW-46, SW-47, and SW-48. PBEL analyzed the samples for BTEX, TPH, and chloride, and reported benzene, BTEX, and TPH below the NMOCD closure criteria. Chloride was reported above NMOCD closure criteria in samples SW-17 (850 mg/Kg), SW-19 (1,320 mg/Kg), and SW-30 (693 mg/Kg).

On December 15, 2021, LAI personnel collected five (5) composite samples (SW-6, SW-7, SW-25, SW-30, and SW-44) from locations where further excavation was performed due to previous laboratory analysis showing that chloride concentrations above NMOCD closure criteria. Eurofins Xenco Laboratories (Xenco), a NELAC accredited laboratory, located in Midland, Texas, analyzed the samples for BTEX, TPH, and chloride. Xenco reported benzene, BTEX, and TPH concentrations in all samples below the NMOCD closure criteria. Chloride was reported above NMOCD closure criteria in sample SW-6 (639 mg/Kg).

On January 13, 2022, LAI personnel collected eight (8) composite samples from locations where further excavation was performed due to previous laboratory analysis showing that chloride was above NMOCD closure criteria. The resampled areas include SW-2, SW-10, SW-20, SW-28, SW-29, SW-41, SW-42, and SW-45. Xenco reported benzene, BTEX and TPH below NMOCD closure criteria. Chloride was reported above NMOCD closure criteria in samples SW-10 (2,970 mg/Kg), SW-20 (1,490 mg/Kg), and SW-45 (1,590 mg/Kg).

Between February 1 and 9, 2022, LAI personnel collected twenty-one (21) composite samples (BH-79 through BH-99) from the bottom of the newly excavated area. The resampled areas included SW-5, SW-6, SW-8, SW-10, SW-11, SW-12, SW-13, SW-14, SW-17, SW-19, SW-20, SW-22, SW-23, SW-24, SW-34, SW-38, SW-39, SW-43, and SW-45. Xenco analyzed the samples for BTEX, TPH, and chloride, and reported benzene, BTEX, and TPH below NMOCD closure criteria. Chloride reported was above the NMOCD closure criteria in the following twelve (12) samples:

Sample	Position	Depth (ft)	Cl^- (mg/Kg)	Sample	Position	Depth (ft)	Cl^- (mg/Kg)
SW-5	Sidewall	0-4.1	740	SW-22	Sidewall	0-4.1	647
SW-6	Sidewall	0-4.1	741	SW-24	Sidewall	0-4.1	1,020
SW-11	Sidewall	0-4.1	730	SW-34	Sidewall	0-4.1	649
SW-13	Sidewall	0-4.1	695	SW-38	Sidewall	0-4.1	650
SW-17	Sidewall	0-4.1	1,120	SW-39	Sidewall	0-4.1	741
SW-19	Sidewall	0-4.1	1,250	SW-43	Sidewall	0-4.1	676

Between March 1 and 4, 2022, LAI personnel collected forty (40) composite soil samples (B-100 through B-139) from the bottom of the newly excavated area. Twelve (12) composite samples were collected from the sidewalls that were further excavated due to laboratory analysis showing that chloride was above NMOCD closure criteria. The resampled areas include SW-5, SW-6, SW-11, SW-13, SW-17, SW-19, SW-22,

SW-24, SW-34, SW-38, SW-39, and SW-43. Xenco analyzed the samples for BTEX, TPH, and chloride, and reported BTEX and TPH below NMOCD closure criteria. Chloride was reported above NMOCD closure criteria in sample B-123 (21,500 mg/Kg).

On March 24, 2022, LAI personnel collected one (1) composite sample (B-123) from the area where additional soil was excavated due to laboratory analysis showing that chloride was above NMOCD closure criteria. PBEL analyzed the sample for BTEX, TPH, and chloride and reported all analyte concentrations below NMOCD closure criteria. Approximately 4,243 cubic yards of soil was excavated from the spill area and disposed at the Gandy Marley Disposal Facility, located near Roswell, New Mexico.

The laboratory results demonstrate the release was remediated below the NMOCD closure criteria of 10 mg/Kg (benzene), 50 mg/Kg (BTEX), 2,500 mg/Kg (TPH), and 20,000 mg/Kg (chloride) in Table 1 of 19.15.29NMAC below four (4) feet bgs. Table 2 presents the laboratory analytical data summary. Figure 4 presents an aerial map with composite confirmation sample locations. Appendix E presents the laboratory reports.

On December 6, 2021, LAI personnel collected nine (9) composite samples (BF-1 through BF-9) of backfill soil from a borrow pit located in Unit D, Section 36, Township 15 South, Range 29 East, Chaves County, New Mexico. Xenco analyzed the samples for BTEX, TPH and chloride. Benzene, BTEX and TPH were below the analytical method RL. Chloride ranged from 12.8 mg/Kg (BF-1) to 156 mg/Kg (BF-6). Table 2 presents the laboratory analytical data summary. Appendix E presents the laboratory reports.

Between March 24, 2022, and April 29, 2022, P2 backfilled the excavation to approximately 2-feet bgs with caliche and to surface level with topsoil from the borrow pit. P2 seeded the release area with BLM Mix #2. Table 2 presents the backfill material analytical data summary. Appendix F presents photographic documentation.

4.0 CLOSURE REQUEST

Select requests closure for nAPP2116660324.

Tables

Table 1
Delineation Soil Sample Analytical Data Summary
Select Energy - Mack PW Release
Chaves County, New Mexico
33° 00' 30.00" North, 103° 59' 52.96" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100/2,500**	**600/20,000**
S-1	0.5	06/15/2021	In-Situ	<0.00109	<0.00217	<27.2	32.0	<27.2	32.0	**6,620**
	1	06/15/2021	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	**4,730**
	1	07/30/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**9,910**
	3	07/30/2021	In-Situ	<0.00115	0.00264	<28.7	<28.7	<28.7	<28.7	**12,800**
	5	07/30/2021	In-Situ	<0.00116	<0.00233	<29.1	<29.1	<29.1	<29.1	8,570
	10	07/30/2021	In-Situ	<0.00106	0.00452	<26.6	<26.6	<26.6	<26.6	124
S-2	0.5	06/15/2021	In-Situ	<0.00111	<0.00222	<27.8	<28.7	<27.8	<27.8	**10,700**
	1	06/15/2021	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	**11,400**
	1	07/30/2021	In-Situ	<0.00119	<0.00238	<29.8	<29.8	<29.8	<29.8	**12,100**
	3	07/30/2021	In-Situ	<0.00120	<0.00241	<30.1	<30.1	<30.1	<30.1	**14,400**
	5	07/30/2021	In-Situ	<0.00120	0.00458	<30.1	<30.1	<30.1	<30.1	11,500
	10	07/30/2021	In-Situ	<0.00108	0.00315	<26.9	<26.9	<26.9	<26.9	263
S-3	0.5	06/15/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**9,870**
	1	06/15/2021	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	**11,000**
	1	07/30/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	43.5	43.5	**7,660**
	3	07/30/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**8,230**
	5	07/30/2021	In-Situ	<0.00119	<0.00238	<29.8	<29.8	<29.8	<29.8	14,600
	10	07/30/2021	In-Situ	<0.00115	0.0061	<28.7	<28.7	<28.7	<28.7	433
S-4	0.5	06/15/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**10,400**
	1	06/15/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**12,200**
	1	07/29/2021	In-Situ	<0.00111	0.00321	<27.8	<27.8	<27.8	<27.8	**8,580**

Table 1
Delineation Soil Sample Analytical Data Summary
Select Energy - Mack PW Release
Chaves County, New Mexico
33° 00' 30.00" North, 103° 59' 52.96" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100/2,500**	**600/20,000**
	3	07/29/2021	In-Situ	<0.00116	<0.00233	<29.1	<29.1	<29.1	<29.1	**12,800**
	5	07/29/2021	In-Situ	<0.00125	0.00654	<31.2	<31.2	<31.2	<31.2	3,410
	10	07/29/2021	In-Situ	<0.00106	0.00537	<26.6	<26.6	<26.6	<26.6	140
S-5	0.5	06/15/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**11,900**
	1	06/15/2021	In-Situ	<0.00112	<0.00225	<28.1	31.1	<28.1	31.1	**11,300**
	1	07/29/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**6,440**
	3	07/29/2021	In-Situ	<0.00119	0.00623	<29.8	<29.8	<29.8	<29.8	**13,600**
	5	07/29/2021	In-Situ	<0.00120	<0.00241	<30.1	<30.1	<30.1	<30.1	514
	10	07/29/2021	In-Situ	<0.00102	0.00481	<25.5	<25.5	<25.5	<25.5	93.9
S-6	0.5	06/15/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**11,700**
	1	06/15/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**11,400**
	1	07/29/2021	In-Situ	<0.00110	0.00274	<27.5	<27.5	<27.5	<27.5	**6,000**
	3	07/29/2021	In-Situ	<0.00116	<0.00233	<29.1	<29.1	<29.1	<29.1	**10,300**
	5	07/29/2021	In-Situ	<0.00110	0.00245	<27.5	<27.5	<27.5	<27.5	**6,940**
	10	07/29/2021	In-Situ	<0.00112	0.0024	<28.1	<28.1	<28.1	<28.1	**720**
S-7	0.5	06/15/2021	In-Situ	<0.00114	<0.00227	<28.4	29.9	<28.4	29.9	**11,900**
	1	06/15/2021	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	**7,680**
	1	07/29/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**804**
	3	07/29/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**5,170**
	5	07/29/2021	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	4,590
	10	07/29/2021	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	298

Table 1
Delineation Soil Sample Analytical Data Summary
Select Energy - Mack PW Release
Chaves County, New Mexico
33° 00' 30.00" North, 103° 59' 52.96" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100/2,500**	**600/20,000**
S-8	0.5	06/15/2021	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**11,200**
	1	06/15/2021	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	**12,100**
	1	07/29/2021	In-Situ	<0.00119	<0.00238	<29.8	<29.8	<29.8	<29.8	**11,700**
	3	07/29/2021	In-Situ	<0.00199	<0.00238	<29.8	<29.8	<29.8	<29.8	**14,800**
	5	07/29/2021	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	4,590
	10	07/29/2021	In-Situ	<0.00116	<0.00233	<29.1	<29.1	<29.1	<29.1	215
S-9	0.5	06/15/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**9,640**
	1	06/15/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**9,500**
	1	07/29/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**915**
	3	07/29/2021	In-Situ	<0.00111	0.00233	<27.8	<27.8	<27.8	<27.8	**5,770**
	5	07/29/2021	In-Situ	<0.00116	<0.00233	<29.1	<29.1	<29.1	<29.1	964
	10	07/29/2021	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	191
S-10	0.5	06/15/2021	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	**11,300**
	1	06/15/2021	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	**12,400**
	1	07/28/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**2,850**
	3	07/28/2021	In-Situ	<0.00118	<0.00235	<29.4	<29.4	<29.4	<29.4	**10,000**
	5	07/28/2021	In-Situ	<0.00112	0.00475	<28.1	<28.1	<28.1	<28.1	11,200
	10	07/28/2021	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	66.7
S-11	0.5	06/15/2021	In-Situ	<0.00110	<0.00220	<27.5	60.4	<27.5	60.4	**9,610**
	1	07/28/2021	In-Situ	<0.00111	0.00333	<27.8	<27.8	<27.8	<27.8	**1,370**

Table 1
Delineation Soil Sample Analytical Data Summary
Select Energy - Mack PW Release
Chaves County, New Mexico
33° 00' 30.00" North, 103° 59' 52.96" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100/2,500**	**600/20,000**
	3	07/28/2021	In-Situ	<0.00115	0.00501	<28.7	<28.7	,28.7	<28.7	**11,400**
	5	07/28/2021	In-Situ	<0.00199	<0.00238	<29.8	<29.8	<29.8	<29.8	11,500
	10	07/28/2021	In-Situ	<0.00112	0.00285	<28.1	<28.1	<28.1	<28.1	214
S-12	0.5	06/15/2021	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	**10,600**
	1	06/15/2021	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	**10,700**
	1	07/28/2021	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	**1,880**
	3	07/28/2021	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	**10,800**
	5	07/28/2021	In-Situ	<0.00127	0.00410	<31.6	<31.6	<31.6	<31.6	**12,400**
	10	07/28/2021	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	295
S-13	0.5	06/15/2021	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	**6,010**
	1	06/15/2021	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	**7,140**
	1	07/28/2021	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	**4,220**
	3	07/28/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**7,530**
	5	07/28/2021	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	6,430
	10	07/28/2021	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	70.9
S-14	0.5	06/15/2021	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	66.9
S-15	0.5	06/15/2021	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	81.7
S-16	0.5	06/15/2021	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	11.7

Table 1
Delineation Soil Sample Analytical Data Summary
Select Energy - Mack PW Release
Chaves County, New Mexico
33° 00' 30.00" North, 103° 59' 52.96" West

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				**10**	**50**				**100/2,500**	**600/20,000**
S-17	0.5	06/15/2021	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	25.6

Notes:
Analysis performed by Permian Basin Environmental Laboratory (PBEL) in Midland, Texas by EPA SW-846 8021B (BTEX), 8015M (TPH), and 300E (Chloride)
mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)
<: concentration less than analytical method reporting limit
Bold and Highlighted exceeds OCD remediation action limits

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
B-1	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	12,700
B-2	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	9,840
B-3	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	9,260
B-4	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	14,100
B-5	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	8,660
B-6	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	6,660
B-7	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	5,650
B-8	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	5,910
B-9	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	12,200
B-10	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	6,480
B-11	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	4,010
B-12	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	8,470
B-13	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	3,630
B-14	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	3,910
B-15	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	4,360
B-16	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	7,460
B-17	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	4,440
B-18	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	5,720
B-19	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	7,100
B-20	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	9,980
B-21	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	5,080
B-22	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	13,900
B-23	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	5,490
B-24	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	5,610
B-25	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	5,180
B-26	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	5,370
B-27	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	501
B-28	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	13,500
B-29	Bottom	4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**20,800**
		5	11/09/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	5,540

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
B-30	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	8,030
B-31	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	10,100
B-32	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	10,200
B-33	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00109	<0.00217	<27.2	<27.2	<27.2	<27.2	4,700
B-34	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	5,690
B-35	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	8,430
B-36	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	6,150
B-37	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	4,000
B-38	Bottom	4.1	10/18/2021 [1]	Excavated	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	**24,300**
		5	11/09/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	5,400
B-39	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	12,200
B-40	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	18,600
B-41	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	11,100
B-42	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	13,100
B-43	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	6,950
B-44	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	9,530
B-45	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	12,300
B-46	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	12,700
B-47	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	14,100
B-48	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	10,800
B-49	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	9,830
B-50	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	8,260
B-51	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	2,100
B-52	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	8,500
B-53	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	6,170
B-54	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	7,520
B-55	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	12,500
B-56	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	3,740
B-57	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	15,600
B-58	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	5,630

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
B-59	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	11,100
B-60	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	11,800
B-61	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	9,670
B-62	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	12,900
B-63	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	7,640
B-64	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	7,010
B-65	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	1,730
B-66	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	2,790
B-67	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00114	<0.00227	<28.4	<28.4	<28.4	<28.4	5,220
B-68	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	4,150
B-69	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	5,360
B-70	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	6,740
B-71	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	8,830
B-72	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00111	<0.00222	<27.8	<27.8	<27.8	<27.8	8,700
B-73	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00115	<0.00230	<28.7	<28.7	<28.7	<28.7	12,700
B-74	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	6,210
B-75	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	4,950
B-76	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	5,050
B-77	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	1,610
B-78	Bottom	4.1	10/18/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	568
BH-79	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	2,510
BH-80	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	411
BH-81	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	659
BH-82	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	321
BH-83	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	333
BH-84	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	192
BH-85	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	2,470
BH-86	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	770
BH-87	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	957
BH-88	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	30.5

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
BH-89	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	65.4
BH-90	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	1,360
BH-91	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	4,210
BH-92	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00198	<0.00397	<49.9	<49.9	<49.9	<49.9	4,950
BH-93	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	4,470
BH-94	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	1,480
BH-95	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	2,250
BH-96	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	51.2
BH-97	Bottom	4.1	02/08/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	192
BH-98	Bottom	4.1	02/09/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	271
BH-99	Bottom	4.1	02/09/2022 [2]	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	2,710
B-100	Bottom	4.1	03/01/2022 [2]	In-Situ	0.00464	0.0101	<49.9	<49.9	<49.9	<49.9	2,290
B-101	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	4,120
B-102	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	6,120
B-103	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	766
B-104	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	1,880
B-105	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	1,940
B-106	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	9,680
B-107	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	1,430
B-108	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	1,560
B-109	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	1,500
B-110	Bottom	4.1	03/01/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	1,430
B-111	Bottom	4.1	03/02/2022 [2]	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	520
B-112	Bottom	4.1	03/02/2022 [2]	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	1,920
B-113	Bottom	4.1	03/02/2022 [2]	In-Situ	<0.00200	<0.00400	<49.8	<49.8	<49.8	<49.8	3,270
B-114	Bottom	4.1	03/02/2022 [2]	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	76.4
B-115	Bottom	4.1	03/02/2022 [2]	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	67.8
B-116	Bottom	4.1	03/03/2022 [2]	In-Situ	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	14,100
B-117	Bottom	4.1	03/03/2022 [2]	In-Situ	<0.00202	<0.00403	<49.8	239.0	<49.8	239.0	2,080
B-118	Bottom	4.1	03/03/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	50.1	<50.0	50.1	3,240

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
B-119	Bottom	4.1	03/03/2022 [2]	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	1,350
B-120	Bottom	4.1	03/03/2022 [2]	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	1,520
B-121	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	3,040
B-122	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	6,630
B-123	Bottom	4.1	03/04/2022 [2]	Excavated	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	**21,500**
		5	03/24/2022 [1]	In-Situ	<0.00108	<0.00215	<26.9	<26.9	<26.9	<26.9	6,080
B-124	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	222
B-125	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	330
B-126	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	705
B-127	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00199	0.0103	<50.0	<50.0	<50.0	<50.0	333
B-128	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	60.4	<49.9	60.4	843
B-129	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	4,860
B-130	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	3,030
B-131	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00200	<0.00401	<50.0	60.8	<50.0	60.8	9,220
B-132	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00200	<0.00401	<50.0	<50.0	<50.0	<50.0	1,150
B-133	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	6,770
B-134	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	2,650
B-135	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	4,240
B-136	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00198	0.0121	<50.0	<50.0	<50.0	<50.0	1,230
B-137	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	90.4
B-138	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	234
B-139	Bottom	4.1	03/04/2022 [2]	In-Situ	<0.00199	0.0245	<50.0	<50.0	<50.0	<50.0	167
SW-1	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**1,080**
			11/09/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	49.3
SW-2	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**8,540**
			01/13/2022 [2]	In-Situ	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	56.5
SW-3	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**19,400**
			11/09/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	251
SW-4	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**22,800**
			11/09/2021 [1]	In-Situ	<0.00101	<0.00202	25.6	<25.3	<25.3	<25.6	105

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
SW-5	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**8,780**
			02/01/2022 [2]	Excavated	0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	**740**
			03/01/2022 [2]	In-Situ	0.00202	<0.00403	<49.8	<49.8	<49.8	<49.8	63.2
SW-6	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**4,630**
			12/15/2021 [2]	Excavated	0.00202	0.02286	<49.9	<49.9	<49.9	<49.9	**639**
			02/01/2022 [2]	Excavated	0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	**741**
			03/01/2022 [2]	In-Situ	<0.00202	<0.00403	<50.0	71.3	<50.0	71.3	126
SW-7	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**6,880**
			12/15/2021 [2]	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	150
SW-8	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	**22,000**
			02/01/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	367
SW-9	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**9,610**
			11/09/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	456
SW-10	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**12,900**
			01/13/2022 [2]	Excavated	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	**2,970**
			02/01/2022 [2]	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	51.6
SW-11	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**12,200**
			02/01/2022 [2]	Excavated	<0.00199	<0.00398	<49.9	<49.7	<49.7	<49.7	**730**
			03/04/2022 [2]	In-Situ	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	71.3
SW-12	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**5,570**
			02/01/2022 [2]	In-Situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	268
SW-13	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	**12,800**
			02/08/2022 [2]	Excavated	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	**695**
			03/02/2022 [2]	In-Situ	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	83.5
SW-14	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**43,500**
			02/08/2022 [2]	In-Situ	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	42
SW-15	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**29,600**
			11/09/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	163
SW-16	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**14,400**
			11/09/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	414

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
SW-17	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**9,280**
			11/09/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**850**
			02/02/2022 [2]	Excavated	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	**1,120**
			03/02/2022 [2]	In-Situ	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	151
SW-18	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**8,580**
			11/09/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	434
SW-19	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**15,800**
			11/10/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**1,320**
			02/02/2022 [2]	Excavated	<0.00200	<0.00399	<49.9	<49.9	<49.8	<49.9	**1,250**
			03/03/2022 [2]	In-Situ	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	84.2
SW-20	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**3,900**
			01/13/2022 [2]	Excavated	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	**1,490**
			02/08/2022 [2]	In-Situ	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	12.7
SW-21	Sidewall	0-4.1	10/18/2021 [1]	Excavated	0.00151	0.02031	<25.3	<25.3	<25.3	<25.3	**5,460**
			11/10/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	7.47
SW-22	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**8,550**
			02/08/2022 [2]	Excavated	<0.00200	<0.00401	<49.9	<49.9	<49.9	<49.9	**647**
			03/03/2022 [2]	In-Situ	<0.00201	<0.00402	<49.8	<49.8	<49.8	<49.8	13.8
SW-23	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**9,000**
			02/08/2022 [2]	In-Situ	<0.00200	<0.00399	<49.9	<49.9	<49.9	<49.9	460
SW-24	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**12,800**
			02/08/2022 [2]	Excavated	<0.00202	<0.00403	<50.0	<50.0	<50.0	<50.0	**1,020**
			03/04/2022 [2]	In-Situ	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<4.99
SW-25	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**9,190**
			12/15/2021 [2]	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	225
SW-26	Sidewall	0-4.1	10/18/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	9.89
SW-27	Sidewall	0-4.1	10/18/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	78.1
SW-28	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**650**
			01/13/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	106
SW-29	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**2,430**

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
			01/13/2022 [2]	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	374
SW-30	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**913**
			11/17/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**693**
			12/15/2021 [2]	In-Situ	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	51.4
SW-31	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**678**
			11/17/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	208
SW-32	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**990**
			11/17/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	<25.0	<25.0	<25.0	22.2
SW-33	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00110	<0.00220	<27.5	<27.5	<27.5	<27.5	**4,960**
			11/17/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	124
SW-34	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**3,110**
			02/08/2022 [2]	Excavated	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	**649**
			03/02/2022 [2]	In-Situ	<0.00200	<0.00400	<50.0	<50.0	<50.0	<50.0	46.0
SW-35	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**2,860**
			11/17/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	68.3
SW-36	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	**2,340**
			11/17/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	445
SW-37	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	**1,780**
			11/10/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	303
SW-38	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**7,650**
			02/09/2022 [2]	Excavated	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	**650**
			03/01/2022 [2]	In-Situ	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	12.6
SW-39	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**4,900**
			02/07/2022 [2]	Excavated	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	**741**
			03/01/2022 [2]	In-Situ	<0.00200	<0.00401	<49.9	53.2	<49.9	53.2	115
SW-40	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**25,900**
			11/09/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	271
SW-41	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	**8,160**
			01/13/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	307
SW-42	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**9,060**

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**
			01/13/2022 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	80.5
SW-43	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	**7,000**
			02/01/2022 [2]	Excavated	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	**676**
			03/01/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	311
SW-44	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00112	<0.00225	<28.1	<28.1	<28.1	<28.1	**24,200**
			12/15/2021 [2]	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	176
SW-45	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00106	<0.00213	<26.6	<26.6	<26.6	<26.6	**15,900**
			01/13/2022 [2]	Excavated	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	**1,590**
			02/01/2022 [2]	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	476
SW-46	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**7,850**
			11/10/2021 [1]	In-Situ	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	480
SW-47	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	**6,370**
			11/10/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	254
SW-48	Sidewall	0-4.1	10/18/2021 [1]	Excavated	<0.00102	<0.00204	<25.5	<25.5	<25.5	<25.5	**1,400**
			11/10/2021 [1]	In-Situ	<0.00100	<0.00200	<25.0	29.6	<25.0	29.6	8.52
Backfill Confirmation Composite Samples											
BF-1	Backfill	--	12/06/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	12.8
BF-2	Backfill	--	12/06/2021 [1]	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	146
BF-3	Backfill	--	12/06/2021 [1]	In-Situ	<0.00104	<0.00208	<26.0	<26.0	<26.0	<26.0	40.2
BF-4	Backfill	--	12/06/2021 [1]	In-Situ	<0.00103	<0.00206	<25.8	<25.8	<25.8	<25.8	76.4
BF-5	Backfill	--	12/06/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	129
BF-6	Backfill	--	12/06/2021 [1]	In-Situ	<0.00105	<0.00211	<26.3	<26.3	<26.3	<26.3	156
BF-7	Backfill	--	12/06/2021 [1]	In-Situ	<0.00102	<0.0204	<25.5	<25.5	<25.5	<25.5	28.4
BF-8	Backfill	--	12/06/2021 [1]	In-Situ	<0.00102	<0.0204	<25.5	<25.5	<25.5	<25.5	16.4
BF-9	Backfill	--	12/06/2021 [1]	In-Situ	<0.00101	<0.00202	<25.3	<25.3	<25.3	<25.3	37.1

Table 2
Confirmation Soil Sample Analytical Data Summary
Select Energy Services, Mack PW Release
Chaves County, New Mexico
33°00'30.00" N, 103.°59'52.96" W

Sample ID	Location	Depth (feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
RAL:					**10**	**50**				**100/2,500**	**600/20,000**

Notes:

[1]: Analysis performed by Permian Basin Environmental Laboratory (PBEL), by EPA-846 Methods 8021B (BTEX), 8015M (TPH), and Method 300 (chloride)

[2]: Analysis performed by Eurofins-Xenco (Xenco), by EPA-846 Methods 8021B (BTEX), 8015M (TPH), and Method 300 (chloride)

mg/Kg: milligrams per kilogram; equivalent to parts per million (ppm)

<: concentration less than analytical method reporting limit

Bold and highlighted denotes concentrations above NMOCD closure criteria

Figures

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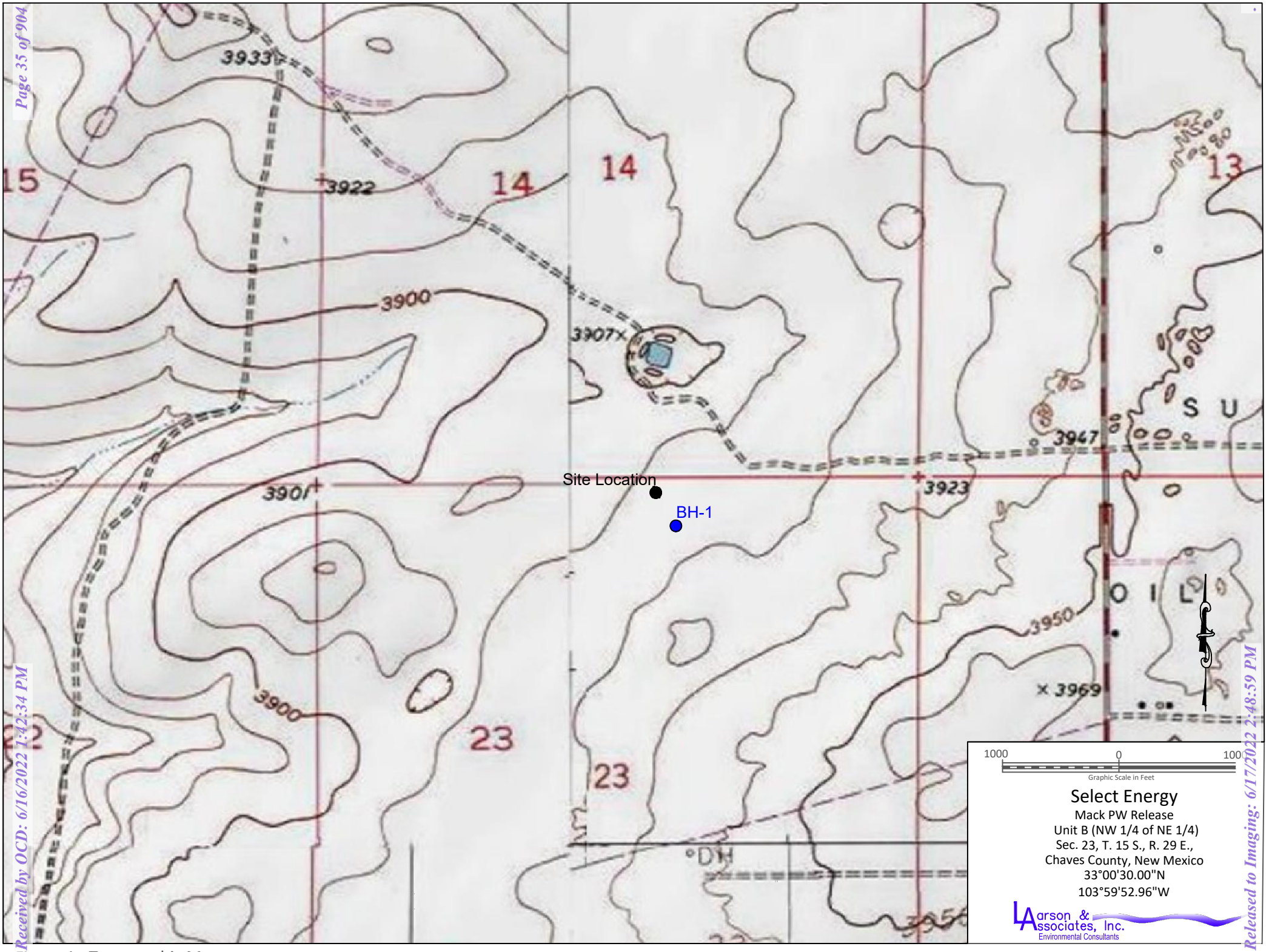

Figure 1 - Topographic Map

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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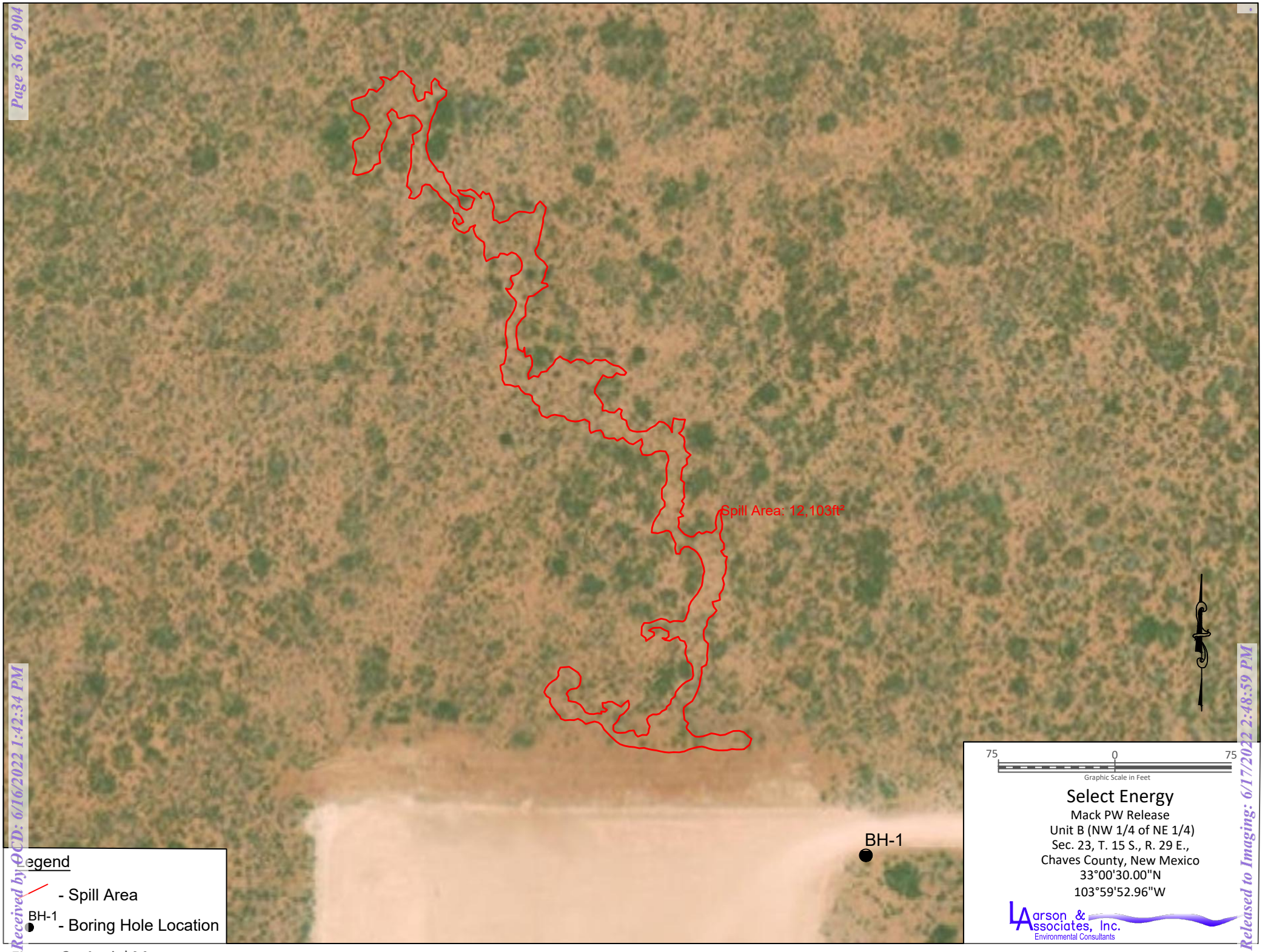

Figure 2 - Aerial Map

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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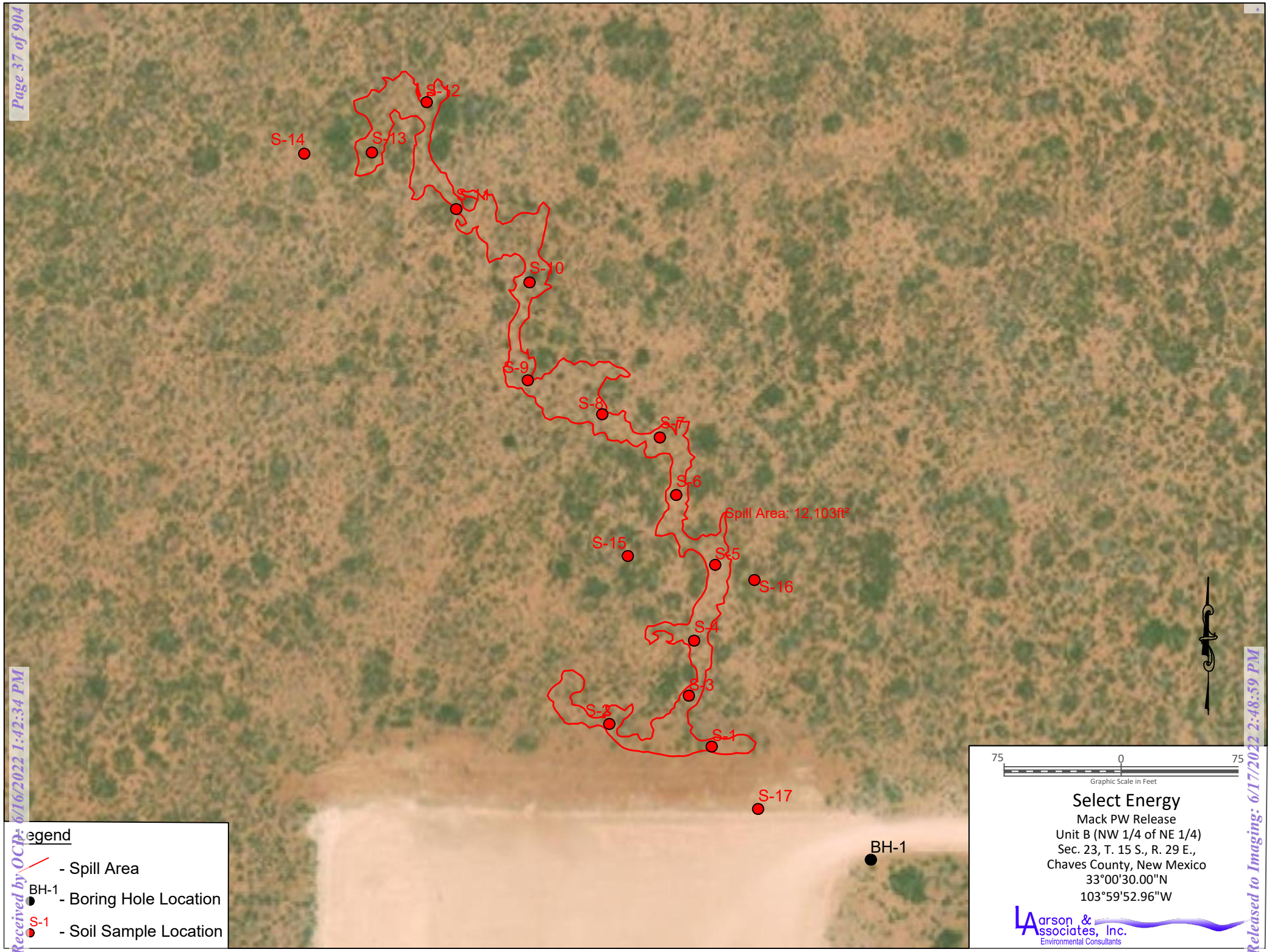

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Figure 3 - Aerial Map Showing Delineation Sample Locations

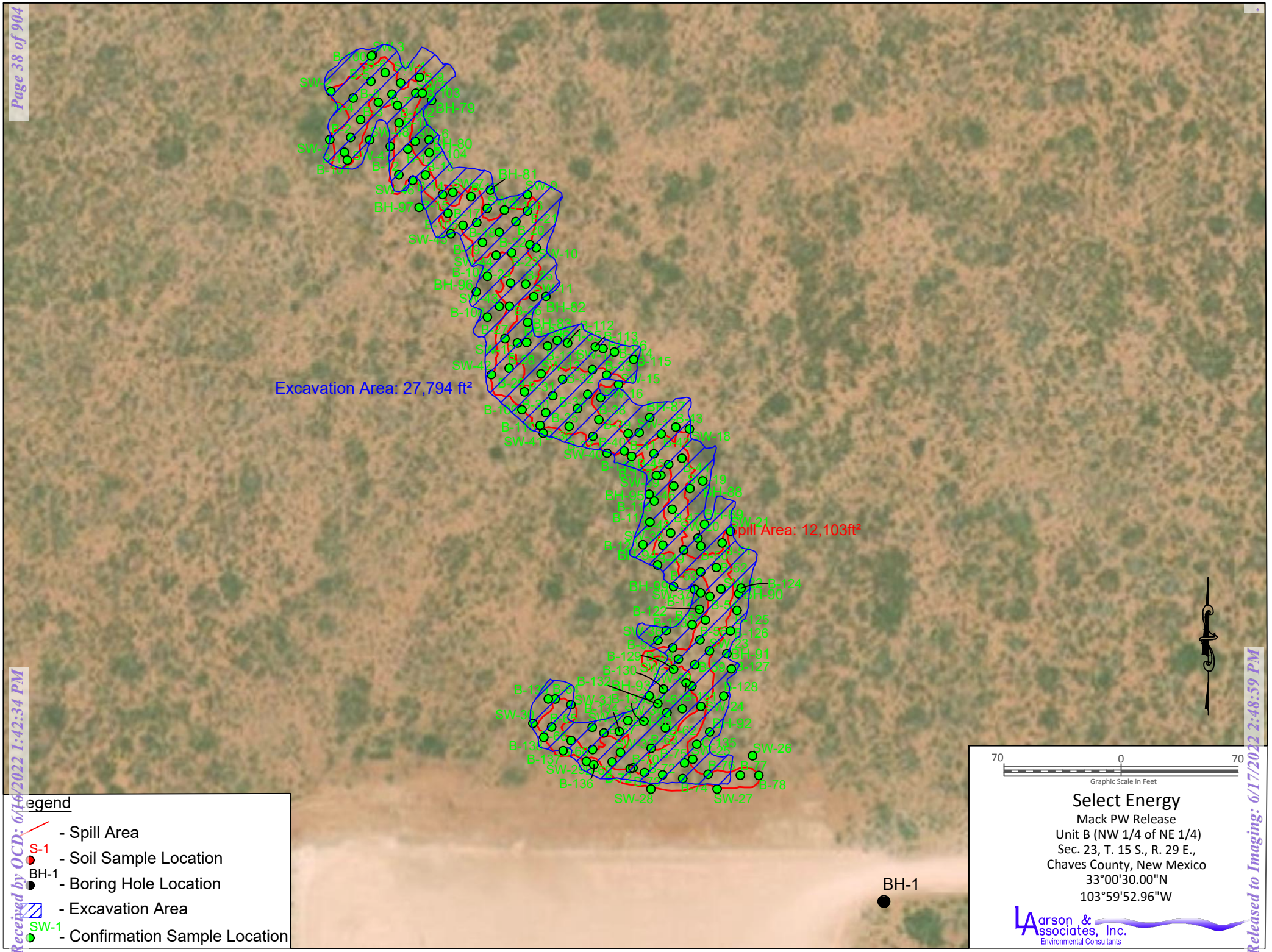

Figure 4 - Aerial Map Showing Excavation Location and Confirmation Samples

Received by OCD: 6/16/2022 1:42:34 PM
Released to Imaging: 6/17/2022 2:48:59 PM

Appendix A

Initial C-141

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

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

QUESTIONS

Action 32193

QUESTIONS

Operator: SELECT ENERGY SERVICES, LLC 201 California Street Gainesville, TX 76240	OGRID: 289068
	Action Number: 32193
	Action Type: [NOTIFY] Notification Of Release (NOR)

QUESTIONS

Location of Release Source	
Please answer all of the questions in this group.	
Site Name	Mack Energy Frac Line
Date Release Discovered	06/14/2021
Surface Owner	Private

Incident Details	
Please answer all of the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endagering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	*Not answered.*
Produced Water Released (bbls) Details	Cause: Blow Out | Flow Line - Injection | Produced Water | Spilled: 571 BBL | Recovered: 0 BBL | Lost: 571 BBL]
Is the concentration of dissolved chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Unknown
Was this a major release as defined by 19.15.29.7(A) NMAC	**Yes, major release.**
Reasons why this would be considered a submission for a notification of a major release	• Unauthorized release of a volume, excluding gases, of 25 barrels or more
If YES, was immediate notice given to the OCD, by whom	*Not answered.*
If YES, was immediate notice given to the OCD, to whom	*Not answered.*
If YES, was immediate notice given to the OCD, when	*Not answered.*
If YES, was immediate notice given to the OCD, by what means (phone, email, etc)	*Not answered.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	*Not answered.*
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 prepare and attach a narrative of actions to date in the follow-up C-141 submission. 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 prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

ACKNOWLEDGMENTS

Operator: SELECT ENERGY SERVICES, LLC 201 California Street Gainesville, TX 76240	OGRID: 289068
	Action Number: 32193
	Action Type: [NOTIFY] Notification Of Release (NOR)

ACKNOWLEDGMENTS

☑	I acknowledge that I am authorized to submit notification of a releases on behalf of my operator.
☑	I acknowledge that upon submitting this application, I will be creating an new incident file (assigned to my operator) to track the notification(s) and corrective action(s) for a release, pursuant to NMAC 19.15.29.
☑	I acknowledge that creating a new incident file will require my operator to file subsequent submission(s) of form "C-141, Application for administrative approval of a release notification and corrective action", pursuant to NMAC 19.15.29.
☑	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.
☑	I acknowledge the fact that 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.
☑	I acknowledge the fact that, 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.

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

CONDITIONS

Action 32193

CONDITIONS

Operator: SELECT ENERGY SERVICES, LLC 201 California Street Gainesville, TX 76240	OGRID: 289068
	Action Number: 32193
	Action Type: [NOTIFY] Notification Of Release (NOR)

CONDITIONS

Created By	Condition	Condition Date
system	When submitting future reports regarding this release, please submit the calculations used or specific justification for the volumes reported on the initial C-141.	6/15/2021

Appendix B

NMOCD Communications

From: Robert Nelson
To: Hamlet, Robert, EMNRD; victoria.venegas@state.nm.us; Hensley, Chad, EMNRD
Cc: Halie Butler; Mark Larson
Subject: Mack Energy Frac Line (nAPP2116660324) Excavation Backfill Notification
Date: Tuesday, March 22, 2022 11:24:00 AM
Attachments: image001.png
Table 2 Confirmation Soil Sample Analytical Data Summary.pdf
Figure 3 - Aerial Map Showing Excavation Locations and Confirmation Samples 03-04-22.pdf

---

All,

Larson & Associates, Inc. (LAI), on behalf of Select Energy Services (Select), submits the attached confirmation (post remediation) laboratory analytical data and sample location map to the New Mexico Oil Conservation Division (OCD) District II to provide two (2) business days notification prior to backfilling the excavation at the Mack Energy Frac Line (nAPP2116660324) in Lea County, New Mexico. One (1) bottom sample location (B-123) remains above the NMOCD closure criteria and will be excavated concurrently with backfilling operations. Please feel free to contact Halie Butler with Select at (281)467-3153 or hbutler@selectenergy.com , Mark Larson (432) 556-8656 or mark@laenvironmental.com, or me with any questions or concerns.

Thank you,

Robert Nelson
Sr. Geologist
Office – 432-687-0901
Cell – 432-664-4804
rnelson@laenvironmental.com

Larson & Associates, Inc.
Environmental Consultants

Appendix C

Karst Potential Map

Mack PW Release Site
High
Medium
Low

Appendix D

Boring Logs

BORING RECORD

Start: 10:40 MST
Finish: 12:27

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	0	Sand, 2.5YR 3/6 Dark Brown, Fine to Very Fine Grained Sand, Rounded to Sub Rounded, Well Sorted				1			1	10:40
	5	7.5YR 7/4 Pink, Fine to Medium Grained Sand, Sub Rounded to Sub Angular, Moderately Sorted	SW			2			5	10:43
	10	7.5YR 5/3 Brown, Fine Grained Sand, Well Sorted, Sub Rounded to Rounded				3			10	10:47
	15	at 14' Increased to Very Fine Grained Sand and Very Well Sorted				4			15	10:50
	20	2.5YR 5/4 Reddish Brown, Very Fine to Fine Grained Sand, Well Sorted, Well Rounded to Rounded				5			20	10:56
	25					6			25	11:03
	30					7			30	11:05
	35					8			35	11:07
	40					9			40	11:10
Lithology Remains Consistent	45	2.5YR Reddish Brown	SW			10			45	11:19
	50					11			50	11:21
	55	2.5 YR 5/6 Red				12			55	11:25

PID READING scale: 2 4 6 8 10 12 14 16 18

SOIL : _____ PPM
SOIL : _____ PPM

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
LABORATORY TEST LOCATION
PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

JOB NUMBER : Select Energy/ 21-0105-04
HOLE DIAMETER : 5"
LOCATION : Mack PW Release
LAI GEOLOGIST : T. Jackson & M. Baker
DRILLING CONTRACTOR : SDI
DRILLING METHOD : Air Rotary

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 10/06/2021

BORING NUMBER : BH-1

BORING RECORD

Start: 10:40 MST
Finish: 12:27

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	60					13			60	11:26
	65					14			65	11:32
	70		SW			15			70	11:36
	75					16			75	11:43
	80					17			80	11:46
	85					18			85	11:52
	90					19			90	12:01
	95	Sand, 2.5YR 6/3 Light Reddish Brown, Very Fine to Fine Grained Sand, Rounded to Sub Rounded, Well Sorted				20			95	12:05
	100	2.5YR 5/4 Reddish Brown, Fine to Medium Grained Sand, Sub Rounded to Sub Angular, Moderately Sorted				21			100	12:12
	105	2.5YR 5/6 Red, Very Fine to Fine Grained Sand, Rounded to Sub Rounded, Well Sorted At 109' 5/3 Reddish Brown	SW			22			105	12:20
	110					23			110	12:23
	115	TD : 115' Dry After 72 Hours				24			115	12:27

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
L LABORATORY TEST LOCATION
+ PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 10/06/2021

BORING NUMBER : BH-1

JOB NUMBER : Select Energy/ 21-0105-04
HOLE DIAMETER : 5"
LOCATION : Mack PW Release
LAI GEOLOGIST : T. Jackson & M. Baker
DRILLING CONTRACTOR : SDI
DRILLING METHOD : Air Rotary

Appendix E

Laboratory Reports

Delineation Soil Samples

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW Release

Project Number: 21-0105-04

Location: New Mexico

Lab Order Number: 1F16002

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 06/18/21

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-1 @ 0.5'	1F16002-01	Soil	06/15/21 12:02	06-16-2021 09:15
S-1 @ 1'	1F16002-02	Soil	06/15/21 12:03	06-16-2021 09:15
S-2 @ 0.5'	1F16002-03	Soil	06/15/21 12:07	06-16-2021 09:15
S-2 @ 1'	1F16002-04	Soil	06/15/21 12:08	06-16-2021 09:15
S-3 @ 0.5'	1F16002-05	Soil	06/15/21 12:09	06-16-2021 09:15
S-3 @ 1'	1F16002-06	Soil	06/15/21 12:10	06-16-2021 09:15
S-4 @ 0.5'	1F16002-07	Soil	06/15/21 12:11	06-16-2021 09:15
S-4 @ 1'	1F16002-08	Soil	06/15/21 12:12	06-16-2021 09:15
S-5 @ 0.5'	1F16002-09	Soil	06/15/21 12:13	06-16-2021 09:15
S-5 @ 1'	1F16002-10	Soil	06/15/21 12:14	06-16-2021 09:15
S-6 @ 0.5'	1F16002-11	Soil	06/15/21 12:15	06-16-2021 09:15
S-6 @ 1'	1F16002-12	Soil	06/15/21 12:16	06-16-2021 09:15
S-7 @ 0.5'	1F16002-13	Soil	06/15/21 12:17	06-16-2021 09:15
S-7 @ 1'	1F16002-14	Soil	06/15/21 12:18	06-16-2021 09:15
S-8 @ 0.5'	1F16002-15	Soil	06/15/21 12:20	06-16-2021 09:15
S-8 @ 1'	1F16002-16	Soil	06/15/21 12:21	06-16-2021 09:15
S-9 @ 0.5'	1F16002-17	Soil	06/15/21 12:22	06-16-2021 09:15
S-9 @ 1'	1F16002-18	Soil	06/15/21 12:23	06-16-2021 09:15
S-10 @ 0.5'	1F16002-19	Soil	06/15/21 12:34	06-16-2021 09:15
S-10 @ 1'	1F16002-20	Soil	06/15/21 12:35	06-16-2021 09:15
S-11 @ 0.5'	1F16002-21	Soil	06/15/21 12:37	06-16-2021 09:15
S-12 @ 0.5'	1F16002-22	Soil	06/15/21 12:40	06-16-2021 09:15
S-12 @ 1'	1F16002-23	Soil	06/15/21 12:42	06-16-2021 09:15
S-13 @ 0.5'	1F16002-24	Soil	06/15/21 12:43	06-16-2021 09:15
S-13 @ 1'	1F16002-25	Soil	06/15/21 12:44	06-16-2021 09:15
S-14 @ 0.5'	1F16002-26	Soil	06/15/21 12:48	06-16-2021 09:15
S-15 @ 0.5'	1F16002-27	Soil	06/15/21 12:54	06-16-2021 09:15
S-16 @ 0.5'	1F16002-28	Soil	06/15/21 12:57	06-16-2021 09:15
S-17 @ 0.5'	1F16002-29	Soil	06/15/21 13:03	06-16-2021 09:15

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-1 @ 0.5'

1F16002-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:20	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:20	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:20	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:20	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*85.0 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 15:20*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 15:20*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6620**	10.9	mg/kg dry	10	P1F1606	06/16/21 09:55	06/16/21 19:22	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 18:52	TPH 8015M	
>C12-C28	**32.0**	27.2	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 18:52	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 18:52	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.3 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 18:52*	*TPH 8015M*	
Surrogate: o-Terphenyl		*91.3 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 18:52*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**32.0**	27.2	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 18:52	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-1 @ 1'

1F16002-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:42	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:42	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:42	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:42	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 15:42	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.6 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 15:42*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*89.3 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 15:42*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4730**	10.9	mg/kg dry	10	P1F1606	06/16/21 09:55	06/16/21 19:37	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 19:15	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 19:15	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 19:15	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.4 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 19:15*	*TPH 8015M*	
Surrogate: o-Terphenyl		*80.1 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 19:15*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 19:15	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-2 @ 0.5'

1F16002-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:03	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:03	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:03	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:03	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:03	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 16:03*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.5 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 16:03*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10700**	27.8	mg/kg dry	25	P1F1606	06/16/21 09:55	06/16/21 19:52	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 19:38	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 19:38	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 19:38	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.2 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 19:38*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.4 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 19:38*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 19:38	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-2 @ 1'

1F16002-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:24	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:24	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:24	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:24	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:24	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 16:24*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.6 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 16:24*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11400**	28.4	mg/kg dry	25	P1F1606	06/16/21 09:55	06/16/21 20:08	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:00	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:00	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:00	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.1 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 20:00*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.6 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 20:00*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 20:00	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-3 @ 0.5'

1F16002-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:46	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:46	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:46	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:46	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 16:46	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 16:46*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*91.6 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 16:46*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9870**	27.8	mg/kg dry	25	P1F1606	06/16/21 09:55	06/16/21 20:23	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:22	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:22	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:22	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 20:22*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 20:22*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 20:22	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-3 @ 1'

1F16002-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:07	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:07	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:07	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:07	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:07	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 17:07*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 17:07*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11000**	28.4	mg/kg dry	25	P1F1606	06/16/21 09:55	06/16/21 20:38	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:45	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:45	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 20:45	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.8 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 20:45*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 20:45*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 20:45	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-4 @ 0.5'

1F16002-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:28	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:28	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:28	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:28	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:28	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.4 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 17:28*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*87.1 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 17:28*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10400**	28.1	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 12:11	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:07	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:07	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:07	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.4 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 21:07*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 21:07*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 21:07	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-4 @ 1'

1F16002-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:50	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:50	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:50	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:50	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 17:50	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.3 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 17:50*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*89.4 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 17:50*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12200**	28.1	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 12:57	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:30	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:30	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:30	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.8 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 21:30*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 21:30*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 21:30	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-5 @ 0.5'

1F16002-09 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:11	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:11	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:11	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:11	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:11	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*88.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 18:11*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.3 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 18:11*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11900**	28.1	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 13:12	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:52	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:52	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 21:52	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.0 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 21:52*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.3 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 21:52*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 21:52	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-5 @ 1'

1F16002-10 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:32	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:32	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:32	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:32	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 18:32	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*89.9 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 18:32*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 18:32*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11300**	28.1	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 13:27	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 22:14	TPH 8015M	
>C12-C28	**31.1**	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 22:14	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 22:14	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.9 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 22:14*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.4 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 22:14*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**31.1**	28.1	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 22:14	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-6 @ 0.5'

1F16002-11 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:36	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:36	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:36	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:36	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:36	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*89.6 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 19:36*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.1 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 19:36*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11700**	28.1	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 13:42	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 23:20	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 23:20	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 23:20	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.3 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 23:20*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 23:20*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 23:20	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-6 @ 1'

1F16002-12 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:57	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:57	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:57	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:57	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 19:57	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*89.1 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 19:57*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.5 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 19:57*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11400**	28.1	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 13:58	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 23:42	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 23:42	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/16/21 23:42	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.5 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 23:42*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/16/21 23:42*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	06/16/21 15:33	06/16/21 23:42	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-7 @ 0.5'

1F16002-13 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:19	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:19	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:19	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:19	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:19	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.0 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 20:19*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*89.1 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 20:19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11900**	28.4	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 14:13	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:04	TPH 8015M	
>C12-C28	**29.9**	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:04	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:04	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.8 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 00:04*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.0 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 00:04*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**29.9**	28.4	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 00:04	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-7 @ 1'

1F16002-14 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:40	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:40	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:40	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:40	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 20:40	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.7 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 20:40*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.0 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 20:40*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7680**	11.0	mg/kg dry	10	P1F1702	06/17/21 08:59	06/17/21 14:28	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:26	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:26	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:26	TPH 8015M	
Surrogate: 1-Chlorooctane		*100 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 00:26*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 00:26*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 00:26	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-8 @ 0.5'

1F16002-15 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:01	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:01	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:01	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:01	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:01	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 21:01*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*93.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 21:01*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11200**	28.1	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 14:44	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:48	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:48	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 00:48	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 00:48*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 00:48*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 00:48	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-8 @ 1'

1F16002-16 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:22	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:22	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:22	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:22	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:22	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*103 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 21:22*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*95.0 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 21:22*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12100**	28.4	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 14:59	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:10	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:10	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:10	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 01:10*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 01:10*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 01:10	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-9 @ 0.5'

1F16002-17 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:43	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:43	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:43	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:43	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 21:43	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 21:43*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.6 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 21:43*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9640**	27.8	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 15:45	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:32	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:32	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:32	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 01:32*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 01:32*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 01:32	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-9 @ 1'

1F16002-18 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:03	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:03	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:03	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:03	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:03	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 22:03*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.4 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 22:03*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9500**	27.8	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 16:31	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:54	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:54	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 01:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 01:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 01:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 01:54	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-10 @ 0.5'

1F16002-19 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:24	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:24	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:24	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:24	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:24	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.9 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 22:24*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*89.6 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 22:24*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11300**	28.4	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 16:46	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 02:16	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 02:16	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 02:16	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 02:16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 02:16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 02:16	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-10 @ 1'

1F16002-20 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:45	EPA 8021B	
Toluene	ND	0.00115	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:45	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:45	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:45	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1F1706	06/17/21 10:01	06/17/21 22:45	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*94.2 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 22:45*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1F1706*	*06/17/21 10:01*	*06/17/21 22:45*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12400**	28.7	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 17:01	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 02:38	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 02:38	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1F1610	06/16/21 15:33	06/17/21 02:38	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 02:38*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1F1610*	*06/16/21 15:33*	*06/17/21 02:38*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	06/16/21 15:33	06/17/21 02:38	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-11 @ 0.5'

1F16002-21 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:29	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:29	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:29	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:29	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:29	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*92.3 %*		*80-120*	*P1F1707*	*06/17/21 10:05*	*06/18/21 01:29*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*103 %*		*80-120*	*P1F1707*	*06/17/21 10:05*	*06/18/21 01:29*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9610**	27.5	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 17:17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 12:38	TPH 8015M	
>C12-C28	**60.4**	27.5	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 12:38	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 12:38	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*		*70-130*	*P1F1703*	*06/17/21 09:37*	*06/17/21 12:38*	*TPH 8015M*	
Surrogate: o-Terphenyl		*126 %*		*70-130*	*P1F1703*	*06/17/21 09:37*	*06/17/21 12:38*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**60.4**	27.5	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 12:38	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-12 @ 0.5'

1F16002-22 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:50	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:50	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:50	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:50	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 01:50	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.2 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 01:50*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.1 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 01:50*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10600**	10.8	mg/kg dry	10	P1F1702	06/17/21 08:59	06/17/21 17:32	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:01	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:01	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:01	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 13:01*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 13:01*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 13:01	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-12 @ 1'

1F16002-23 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:10	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:10	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:10	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:10	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:10	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.9 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 02:10*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*88.9 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 02:10*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10700**	27.2	mg/kg dry	25	P1F1702	06/17/21 08:59	06/17/21 17:47	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:23	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:23	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:23	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 13:23*	*TPH 8015M*	
Surrogate: o-Terphenyl		*118 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 13:23*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 13:23	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-13 @ 0.5'

1F16002-24 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:31	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:31	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:31	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:31	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:31	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*104 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 02:31*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*96.7 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 02:31*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6010**	10.8	mg/kg dry	10	P1F1702	06/17/21 08:59	06/17/21 18:03	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:46	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:46	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 13:46	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 13:46*	*TPH 8015M*	
Surrogate: o-Terphenyl		*120 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 13:46*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 13:46	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-13 @ 1'

1F16002-25 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:51	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:51	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:51	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:51	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 02:51	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.9 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 02:51*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.5 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 02:51*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7140**	10.9	mg/kg dry	10	P1F1702	06/17/21 08:59	06/17/21 18:18	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:09	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:09	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:09	TPH 8015M	
Surrogate: 1-Chlorooctane		*109 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 14:09*	*TPH 8015M*	
Surrogate: o-Terphenyl		*122 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 14:09*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 14:09	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-14 @ 0.5'

1F16002-26 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:12	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:12	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:12	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:12	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 03:12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*90.2 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 03:12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**66.9**	1.01	mg/kg dry	1	P1F1702	06/17/21 08:59	06/17/21 18:33	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:31	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:31	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:31	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 14:31*	*TPH 8015M*	
Surrogate: o-Terphenyl		*119 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 14:31*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 14:31	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-15 @ 0.5'

1F16002-27 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:32	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:32	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:32	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:32	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:32	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.1 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 03:32*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*86.6 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 03:32*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**81.7**	1.01	mg/kg dry	1	P1F1709	06/17/21 14:19	06/17/21 18:03	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:54	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:54	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 14:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 14:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*118 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 14:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 14:54	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-16 @ 0.5'

1F16002-28 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:53	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:53	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:53	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:53	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 03:53	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*95.4 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 03:53*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1F1707*	*06/17/21 10:05*	*06/18/21 03:53*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11.7**	1.00	mg/kg dry	1	P1F1709	06/17/21 14:19	06/17/21 18:22	EPA 300.0	
% Moisture	ND	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 15:17	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 15:17	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 15:17	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 15:17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*117 %*	*70-130*		*P1F1703*	*06/17/21 09:37*	*06/17/21 15:17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 15:17	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-17 @ 0.5'

1F16002-29 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 04:14	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 04:14	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 04:14	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 04:14	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1F1707	06/17/21 10:05	06/18/21 04:14	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*97.5 %*		*80-120*	*P1F1707*	*06/17/21 10:05*	*06/18/21 04:14*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*87.3 %*		*80-120*	*P1F1707*	*06/17/21 10:05*	*06/18/21 04:14*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**25.6**	1.00	mg/kg dry	1	P1F1709	06/17/21 14:19	06/17/21 18:40	EPA 300.0	
% Moisture	ND	0.1	%	1	P1F1804	06/18/21 10:29	06/18/21 10:34	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 15:40	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 15:40	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1F1703	06/17/21 09:37	06/17/21 15:40	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*		*70-130*	*P1F1703*	*06/17/21 09:37*	*06/17/21 15:40*	*TPH 8015M*	
Surrogate: o-Terphenyl		*118 %*		*70-130*	*P1F1703*	*06/17/21 09:37*	*06/17/21 15:40*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	06/17/21 09:37	06/17/21 15:40	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1706 - * DEFAULT PREP *** **										
Blank (P1F1706-BLK1)				Prepared & Analyzed: 06/17/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.106*		*"*	*0.120*		*88.4*	*80-120*			
LCS (P1F1706-BS1)				Prepared & Analyzed: 06/17/21						
Benzene	0.109	0.00100	mg/kg wet	0.100		109	70-130			
Toluene	0.109	0.00100	"	0.100		109	70-130			
Ethylbenzene	0.111	0.00100	"	0.100		111	70-130			
Xylene (p/m)	0.197	0.00200	"	0.200		98.7	70-130			
Xylene (o)	0.107	0.00100	"	0.100		107	70-130			
Surrogate: 1,4-Difluorobenzene	*0.113*		*"*	*0.120*		*94.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.110*		*"*	*0.120*		*91.5*	*80-120*			
LCS Dup (P1F1706-BSD1)				Prepared & Analyzed: 06/17/21						
Benzene	0.116	0.00100	mg/kg wet	0.100		116	70-130	6.14	20	
Toluene	0.116	0.00100	"	0.100		116	70-130	5.99	20	
Ethylbenzene	0.118	0.00100	"	0.100		118	70-130	5.86	20	
Xylene (p/m)	0.210	0.00200	"	0.200		105	70-130	6.12	20	
Xylene (o)	0.113	0.00100	"	0.100		113	70-130	5.43	20	
Surrogate: 1,4-Difluorobenzene	*0.117*		*"*	*0.120*		*97.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.116*		*"*	*0.120*		*96.6*	*80-120*			
Calibration Blank (P1F1706-CCB1)				Prepared & Analyzed: 06/17/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.106*		*"*	*0.120*		*88.4*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.3*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1706 - * DEFAULT PREP *** **										
Calibration Blank (P1F1706-CCB2)				Prepared & Analyzed: 06/17/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.122*		*"*	*0.120*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.113*		*"*	*0.120*		*94.2*	*80-120*			
Calibration Blank (P1F1706-CCB3)				Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.107*		*"*	*0.120*		*88.8*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.1*	*80-120*			
Calibration Check (P1F1706-CCV1)				Prepared & Analyzed: 06/17/21						
Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120			
Toluene	0.102	0.00100	"	0.100		102	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.188	0.00200	"	0.200		94.1	80-120			
Xylene (o)	0.102	0.00100	"	0.100		102	80-120			
Surrogate: 4-Bromofluorobenzene	*0.113*		*"*	*0.120*		*94.0*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.116*		*"*	*0.120*		*96.8*	*75-125*			
Calibration Check (P1F1706-CCV2)				Prepared & Analyzed: 06/17/21						
Benzene	0.107	0.00100	mg/kg wet	0.100		107	80-120			
Toluene	0.107	0.00100	"	0.100		107	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.188	0.00200	"	0.200		94.2	80-120			
Xylene (o)	0.105	0.00100	"	0.100		105	80-120			
Surrogate: 4-Bromofluorobenzene	*0.110*		*"*	*0.120*		*92.0*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.116*		*"*	*0.120*		*96.6*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1706 - * DEFAULT PREP *** **										
Calibration Check (P1F1706-CCV3)				Prepared & Analyzed: 06/17/21						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120			
Xylene (p/m)	0.206	0.00200	"	0.200		103	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 1,4-Difluorobenzene	*0.117*		"	*0.120*		*97.8*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.113*		"	*0.120*		*94.5*	*75-125*			
Matrix Spike (P1F1706-MS1)		**Source: 1F16002-01**		Prepared & Analyzed: 06/17/21						
Benzene	0.0899	0.00109	mg/kg dry	0.109	ND	82.7	80-120			
Toluene	0.0710	0.00109	"	0.109	ND	65.3	80-120			QM-07
Ethylbenzene	0.0267	0.00109	"	0.109	ND	24.5	80-120			QM-07
Xylene (p/m)	0.160	0.00217	"	0.217	ND	73.8	80-120			QM-07
Xylene (o)	0.0793	0.00109	"	0.109	ND	72.9	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.130*		*98.1*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.133*		"	*0.130*		*102*	*80-120*			
Matrix Spike Dup (P1F1706-MSD1)		**Source: 1F16002-01**		Prepared & Analyzed: 06/17/21						
Benzene	0.0952	0.00109	mg/kg dry	0.109	ND	87.5	80-120	5.70	20	
Toluene	0.0771	0.00109	"	0.109	ND	70.9	80-120	8.19	20	QM-07
Ethylbenzene	0.0322	0.00109	"	0.109	ND	29.6	80-120	18.7	20	QM-07
Xylene (p/m)	0.171	0.00217	"	0.217	ND	78.5	80-120	6.23	20	QM-07
Xylene (o)	0.0872	0.00109	"	0.109	ND	80.2	80-120	9.49	20	
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.130*		*95.3*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.129*		"	*0.130*		*98.9*	*80-120*			
Batch P1F1707 - * DEFAULT PREP *** **										
Blank (P1F1707-BLK1)				Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.107*		"	*0.120*		*89.4*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1707 - * DEFAULT PREP *** **										
LCS (P1F1707-BS1)				Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.120	0.00100	mg/kg wet	0.100		120	70-130			
Toluene	0.118	0.00100	"	0.100		118	70-130			
Ethylbenzene	0.119	0.00100	"	0.100		119	70-130			
Xylene (p/m)	0.213	0.00200	"	0.200		106	70-130			
Xylene (o)	0.114	0.00100	"	0.100		114	70-130			
Surrogate: 1,4-Difluorobenzene	*0.120*		*"*	*0.120*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.119*		*"*	*0.120*		*98.8*	*80-120*			
LCS Dup (P1F1707-BSD1)				Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	70-130	13.1	20	
Toluene	0.103	0.00100	"	0.100		103	70-130	13.5	20	
Ethylbenzene	0.105	0.00100	"	0.100		105	70-130	12.5	20	
Xylene (p/m)	0.187	0.00200	"	0.200		93.3	70-130	13.1	20	
Xylene (o)	0.0986	0.00100	"	0.100		98.6	70-130	14.8	20	
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.115*		*"*	*0.120*		*95.7*	*80-120*			
Calibration Blank (P1F1707-CCB1)				Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.107*		*"*	*0.120*		*88.8*	*80-120*			
Calibration Blank (P1F1707-CCB2)				Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.106*		*"*	*0.120*		*88.1*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*98.8*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1707 - * DEFAULT PREP *** **										
Calibration Check (P1F1707-CCV1)				Prepared & Analyzed: 06/17/21						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120			
Xylene (p/m)	0.206	0.00200	"	0.200		103	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 1,4-Difluorobenzene	*0.117*		"	*0.120*		*97.8*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.113*		"	*0.120*		*94.5*	*75-125*			
Calibration Check (P1F1707-CCV2)				Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.111	0.00100	mg/kg wet	0.100		111	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.113	0.00100	"	0.100		113	80-120			
Xylene (p/m)	0.199	0.00200	"	0.200		99.6	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	*0.116*		"	*0.120*		*96.7*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.114*		"	*0.120*		*95.1*	*75-125*			
Matrix Spike (P1F1707-MS1)		**Source: 1F16002-21**		Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.0936	0.00110	mg/kg dry	0.110	ND	85.2	80-120			
Toluene	0.0768	0.00110	"	0.110	ND	69.9	80-120			
Ethylbenzene	0.0362	0.00110	"	0.110	ND	32.9	80-120			
Xylene (p/m)	0.172	0.00220	"	0.220	ND	78.2	80-120			
Xylene (o)	0.0897	0.00110	"	0.110	ND	81.6	80-120			
Surrogate: 1,4-Difluorobenzene	*0.127*		"	*0.132*		*96.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.125*		"	*0.132*		*95.1*	*80-120*			
Matrix Spike Dup (P1F1707-MSD1)		**Source: 1F16002-21**		Prepared: 06/17/21 Analyzed: 06/18/21						
Benzene	0.102	0.00110	mg/kg dry	0.110	ND	92.6	80-120	8.33	20	
Toluene	0.0884	0.00110	"	0.110	ND	80.5	80-120	14.1	20	
Ethylbenzene	0.0459	0.00110	"	0.110	ND	41.7	80-120	23.6	20	
Xylene (p/m)	0.173	0.00220	"	0.220	ND	78.6	80-120	0.619	20	
Xylene (o)	0.0908	0.00110	"	0.110	ND	82.6	80-120	1.25	20	
Surrogate: 1,4-Difluorobenzene	*0.128*		"	*0.132*		*96.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.123*		"	*0.132*		*93.5*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1606 - * DEFAULT PREP *** **										
Blank (P1F1606-BLK1)				Prepared & Analyzed: 06/16/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1F1606-BS1)				Prepared & Analyzed: 06/16/21						
Chloride	387	1.00	mg/kg wet	400		96.7	90-110			
LCS Dup (P1F1606-BSD1)				Prepared & Analyzed: 06/16/21						
Chloride	389	1.00	mg/kg wet	400		97.2	90-110	0.510	20	
Calibration Check (P1F1606-CCV1)				Prepared & Analyzed: 06/16/21						
Chloride	19.4		mg/kg	20.0		96.9	90-110			
Calibration Check (P1F1606-CCV2)				Prepared & Analyzed: 06/16/21						
Chloride	19.5		mg/kg	20.0		97.6	90-110			
Calibration Check (P1F1606-CCV3)				Prepared & Analyzed: 06/16/21						
Chloride	18.9		mg/kg	20.0		94.6	90-110			
Matrix Spike (P1F1606-MS1)		**Source: 1F14004-28**		Prepared & Analyzed: 06/16/21						
Chloride	1030	1.35	mg/kg dry	676	184	125	80-120			QM-05
Matrix Spike (P1F1606-MS2)		**Source: 1F16004-01**		Prepared & Analyzed: 06/16/21						
Chloride	1820	5.38	mg/kg dry	538	1190	116	80-120			
Matrix Spike Dup (P1F1606-MSD1)		**Source: 1F14004-28**		Prepared & Analyzed: 06/16/21						
Chloride	1060	1.35	mg/kg dry	676	184	129	80-120	2.88	20	QM-05
Matrix Spike Dup (P1F1606-MSD2)		**Source: 1F16004-01**		Prepared & Analyzed: 06/16/21						
Chloride	1800	5.38	mg/kg dry	538	1190	114	80-120	0.603	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1702 - * DEFAULT PREP *** **										
Blank (P1F1702-BLK1)				Prepared & Analyzed: 06/17/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1F1702-BS1)				Prepared & Analyzed: 06/17/21						
Chloride	381	1.00	mg/kg wet	400		95.3	90-110			
LCS Dup (P1F1702-BSD1)				Prepared & Analyzed: 06/17/21						
Chloride	391	1.00	mg/kg wet	400		97.7	90-110	2.52	20	
Calibration Check (P1F1702-CCV1)				Prepared & Analyzed: 06/17/21						
Chloride	19.2		mg/kg	20.0		95.9	90-110			
Calibration Check (P1F1702-CCV2)				Prepared & Analyzed: 06/17/21						
Chloride	18.5		mg/kg	20.0		92.7	90-110			
Calibration Check (P1F1702-CCV3)				Prepared & Analyzed: 06/17/21						
Chloride	19.4		mg/kg	20.0		97.2	90-110			
Matrix Spike (P1F1702-MS1)		**Source: 1F16002-07**		Prepared & Analyzed: 06/17/21						
Chloride	13400	28.1	mg/kg dry	2810	10400	106	80-120			
Matrix Spike (P1F1702-MS2)		**Source: 1F16002-17**		Prepared & Analyzed: 06/17/21						
Chloride	12400	27.8	mg/kg dry	2780	9640	101	80-120			
Matrix Spike Dup (P1F1702-MSD1)		**Source: 1F16002-07**		Prepared & Analyzed: 06/17/21						
Chloride	13600	28.1	mg/kg dry	2810	10400	113	80-120	1.41	20	
Matrix Spike Dup (P1F1702-MSD2)		**Source: 1F16002-17**		Prepared & Analyzed: 06/17/21						
Chloride	12400	27.8	mg/kg dry	2780	9640	98.6	80-120	0.454	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1709 - * DEFAULT PREP *** **										
Blank (P1F1709-BLK1)				Prepared & Analyzed: 06/17/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1F1709-BS1)				Prepared & Analyzed: 06/17/21						
Chloride	397	1.00	mg/kg wet	400		99.3	90-110			
LCS Dup (P1F1709-BSD1)				Prepared & Analyzed: 06/17/21						
Chloride	398	1.00	mg/kg wet	400		99.6	90-110	0.289	20	
Calibration Check (P1F1709-CCV1)				Prepared & Analyzed: 06/17/21						
Chloride	20.7		mg/kg	20.0		104	90-110			
Calibration Check (P1F1709-CCV2)				Prepared & Analyzed: 06/17/21						
Chloride	20.9		mg/kg	20.0		104	90-110			
Calibration Check (P1F1709-CCV3)				Prepared: 06/17/21 Analyzed: 06/18/21						
Chloride	20.9		mg/kg	20.0		105	90-110			
Matrix Spike (P1F1709-MS1)		**Source: 1F17006-01**		Prepared & Analyzed: 06/17/21						
Chloride	600	1.20	mg/kg dry	602	10.8	97.7	80-120			
Matrix Spike (P1F1709-MS2)		**Source: 1F16006-03**		Prepared & Analyzed: 06/17/21						
Chloride	19400	53.2	mg/kg dry	5320	13700	109	80-120			
Matrix Spike Dup (P1F1709-MSD1)		**Source: 1F17006-01**		Prepared & Analyzed: 06/17/21						
Chloride	559	1.20	mg/kg dry	602	10.8	91.1	80-120	6.95	20	
Matrix Spike Dup (P1F1709-MSD2)		**Source: 1F16006-03**		Prepared & Analyzed: 06/17/21						
Chloride	19400	53.2	mg/kg dry	5320	13700	109	80-120	0.0739	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1804 - * DEFAULT PREP *** **										
Blank (P1F1804-BLK1)				Prepared & Analyzed: 06/18/21						
% Moisture	ND	0.1	%							
Blank (P1F1804-BLK2)				Prepared & Analyzed: 06/18/21						
% Moisture	ND	0.1	%							
Blank (P1F1804-BLK3)				Prepared & Analyzed: 06/18/21						
% Moisture	ND	0.1	%							
Duplicate (P1F1804-DUP1)		**Source: 1F16002-10**		Prepared & Analyzed: 06/18/21						
% Moisture	12.0	0.1	%		11.0			8.70	20	
Duplicate (P1F1804-DUP2)		**Source: 1F16002-20**		Prepared & Analyzed: 06/18/21						
% Moisture	12.0	0.1	%		13.0			8.00	20	
Duplicate (P1F1804-DUP3)		**Source: 1F16006-02**		Prepared & Analyzed: 06/18/21						
% Moisture	4.0	0.1	%		5.0			22.2	20	R3
Duplicate (P1F1804-DUP4)		**Source: 1F16006-12**		Prepared & Analyzed: 06/18/21						
% Moisture	10.0	0.1	%		10.0			0.00	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1610 - TX 1005										
Blank (P1F1610-BLK1)				Prepared & Analyzed: 06/16/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*95.6*		"	*100*		*95.6*	*70-130*			
Surrogate: o-Terphenyl	*49.9*		"	*50.0*		*99.9*	*70-130*			
LCS (P1F1610-BS1)				Prepared & Analyzed: 06/16/21						
C6-C12	867	25.0	mg/kg wet	1000		86.7	75-125			
>C12-C28	775	25.0	"	1000		77.5	75-125			
Surrogate: 1-Chlorooctane	*130*		"	*100*		*130*	*70-130*			
Surrogate: o-Terphenyl	*52.5*		"	*50.0*		*105*	*70-130*			
LCS Dup (P1F1610-BSD1)				Prepared & Analyzed: 06/16/21						
C6-C12	944	25.0	mg/kg wet	1000		94.4	75-125	8.51	20	
>C12-C28	805	25.0	"	1000		80.5	75-125	3.80	20	
Surrogate: 1-Chlorooctane	*100*		"	*100*		*100*	*70-130*			
Surrogate: o-Terphenyl	*54.7*		"	*50.0*		*109*	*70-130*			
Calibration Check (P1F1610-CCV1)				Prepared & Analyzed: 06/16/21						
C6-C12	446	25.0	mg/kg wet	500		89.2	85-115			
>C12-C28	493	25.0	"	500		98.7	85-115			
Surrogate: 1-Chlorooctane	*112*		"	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*51.2*		"	*50.0*		*102*	*70-130*			
Calibration Check (P1F1610-CCV2)				Prepared & Analyzed: 06/16/21						
C6-C12	482	25.0	mg/kg wet	500		96.3	85-115			
>C12-C28	450	25.0	"	500		89.9	85-115			
Surrogate: 1-Chlorooctane	*119*		"	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*54.3*		"	*50.0*		*109*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1610 - TX 1005										
Calibration Check (P1F1610-CCV3)				Prepared: 06/16/21 Analyzed: 06/17/21						
C6-C12	516	25.0	mg/kg wet	500		103	85-115			
>C12-C28	481	25.0	"	500		96.2	85-115			
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*58.1*		*"*	*50.0*		*116*	*70-130*			
Matrix Spike (P1F1610-MS1)		**Source: 1F16002-20**		Prepared: 06/16/21 Analyzed: 06/17/21						
C6-C12	1170	28.7	mg/kg dry	1150	19.5	100	75-125			
>C12-C28	1040	28.7	"	1150	17.5	88.8	75-125			
Surrogate: 1-Chlorooctane	*131*		*"*	*115*		*114*	*70-130*			
Surrogate: o-Terphenyl	*54.2*		*"*	*57.5*		*94.3*	*70-130*			
Matrix Spike Dup (P1F1610-MSD1)		**Source: 1F16002-20**		Prepared: 06/16/21 Analyzed: 06/17/21						
C6-C12	1200	28.7	mg/kg dry	1150	19.5	103	75-125	2.37	20	
>C12-C28	1030	28.7	"	1150	17.5	88.0	75-125	0.931	20	
Surrogate: 1-Chlorooctane	*107*		*"*	*115*		*93.4*	*70-130*			
Surrogate: o-Terphenyl	*54.1*		*"*	*57.5*		*94.2*	*70-130*			
Batch P1F1703 - TX 1005										
Blank (P1F1703-BLK1)				Prepared & Analyzed: 06/17/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*108*		*"*	*100*		*108*	*70-130*			
Surrogate: o-Terphenyl	*61.2*		*"*	*50.0*		*122*	*70-130*			
LCS (P1F1703-BS1)				Prepared & Analyzed: 06/17/21						
C6-C12	1080	25.0	mg/kg wet	1000		108	75-125			
>C12-C28	995	25.0	"	1000		99.5	75-125			
Surrogate: 1-Chlorooctane	*112*		*"*	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*61.3*		*"*	*50.0*		*123*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1F1703 - TX 1005										
LCS Dup (P1F1703-BSD1)				Prepared & Analyzed: 06/17/21						
C6-C12	1060	25.0	mg/kg wet	1000		106	75-125	1.72	20	
>C12-C28	988	25.0	"	1000		98.8	75-125	0.712	20	
Surrogate: 1-Chlorooctane	*111*		*"*	*100*		*111*	*70-130*			
Surrogate: o-Terphenyl	*62.0*		*"*	*50.0*		*124*	*70-130*			
Calibration Check (P1F1703-CCV2)				Prepared & Analyzed: 06/17/21						
C6-C12	483	25.0	mg/kg wet	500		96.5	85-115			
>C12-C28	517	25.0	"	500		103	85-115			
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*60.9*		*"*	*50.0*		*122*	*70-130*			
Matrix Spike (P1F1703-MS1)		**Source: 1F16002-29**		Prepared & Analyzed: 06/17/21						
C6-C12	1000	25.0	mg/kg dry	1000	ND	100	75-125			
>C12-C28	944	25.0	"	1000	12.0	93.2	75-125			
Surrogate: 1-Chlorooctane	*102*		*"*	*100*		*102*	*70-130*			
Surrogate: o-Terphenyl	*57.8*		*"*	*50.0*		*116*	*70-130*			
Matrix Spike Dup (P1F1703-MSD1)		**Source: 1F16002-29**		Prepared & Analyzed: 06/17/21						
C6-C12	1010	25.0	mg/kg dry	1000	ND	101	75-125	0.527	20	
>C12-C28	951	25.0	"	1000	12.0	93.9	75-125	0.739	20	
Surrogate: 1-Chlorooctane	*103*		*"*	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*57.9*		*"*	*50.0*		*116*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

ROI	Received on Ice
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
BULK	Samples received in Bulk soil containers
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 6/18/2021

Brent Barron, Laboratory Director/Technical Director

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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WRF CK WNF LRF

№ 1594

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 6/16/2021 PAGE 2 OF 2

PO#: LAB WORK ORDER#: 1F16002

PROJECT LOCATION OR NAME: Mack PW Release

LAI PROJECT #: 21-0105-04 COLLECTOR: RW

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
S-8, 1'	16	6/15/21	1221	S	1				X		X			X	X	X													X	
S-9, 0.5'	17		1222																											
S-9, 1'	18		1223																											
S-10, 0.5	19		1234																											
S-10, 1'	20		1235																											
S-11, 0.5	21		1237																											
S-12, 0.5	22		1240																											
S-12, 1'	23		1242																											
S-13, 0.5	24		1243																											
S-13, 1'	25		1244																											
S-14, 0.5	26		1248																											
S-15 0.5	27		1254																											
S-16, 0.5	28		1257																											
S-12, 0.5	29	"	1303	"	"				"		"			"	"	"													"	
TOTAL					14																									

RELINQUISHED BY:(Signature) DATE/TIME 6/16 9:15 RECEIVED BY: (Signature) Dyna Bledroe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 9.2 10.2 THERM#: CF+1.2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM
Released to Imaging: 6/17/2022 2:48:59 PM

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W CK L

№ 1593

CHAIN-OF-CUSTODY

Page 47 of 47

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 6/16/2021 PAGE 1 OF 2

PO#: LAB WORK ORDER#: 1F16002

PROJECT LOCATION OR NAME: Mack PW Release

LAI PROJECT #: 21-0105-04 COLLECTOR: PW

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Time ~~Date~~	Date ~~Time~~	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
S-1, 0.5'	1	1202	6/15/21	S	1				X		X		X	X	X													X		
S-1, 1'	2	1203																												
S-2, 0.5	3	1207																												
S-2, 1'	4	1208																												
S-3, 0.5	5	1209																												
S-3, 1'	6	1210																												
S-4, 0.5	7	1211																												
S-4, 1'	8	1212																												
S-5 0.5	9	1213																												
S-5, 1'	10	1214																												
S-6, 0.5	11	1215																												
S-6, 1'	12	1216																												
S-7, 0.5	13	1217																												
S-7, 1'	14	1218																												
S-8, 0.5	15	1220																												
TOTAL					15																									

RELINQUISHED BY: (Signature) DATE/TIME 6/16 9:15 RECEIVED BY: (Signature) Teresa Bledsoe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 9.2 10.2 THERM#: CF-1 L2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW Release

Project Number: 21-0105-04

Location: New Mexico

Lab Order Number: 1H03001

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 08/19/21

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-13 @ 1'	1H03001-01	Soil	07/28/21 12:30	08-02-2021 14:15
S-13 @ 3'	1H03001-02	Soil	07/28/21 12:31	08-02-2021 14:15
S-13 @ 5'	1H03001-03	Soil	07/28/21 12:32	08-02-2021 14:15
S-13 @ 10'	1H03001-04	Soil	07/28/21 12:33	08-02-2021 14:15
S-12 @ 1'	1H03001-05	Soil	07/28/21 12:50	08-02-2021 14:15
S-12 @ 3'	1H03001-06	Soil	07/28/21 12:51	08-02-2021 14:15
S-12 @ 5'	1H03001-07	Soil	07/28/21 12:52	08-02-2021 14:15
S-12 @ 10'	1H03001-08	Soil	07/28/21 12:53	08-02-2021 14:15
S-11 @ 1'	1H03001-09	Soil	07/28/21 13:40	08-02-2021 14:15
S-11 @ 3'	1H03001-10	Soil	07/28/21 13:41	08-02-2021 14:15
S-11 @ 5'	1H03001-11	Soil	07/28/21 13:42	08-02-2021 14:15
S-11 @ 10'	1H03001-12	Soil	07/28/21 13:43	08-02-2021 14:15
S-10 @ 1'	1H03001-13	Soil	07/28/21 14:45	08-02-2021 14:15
S-10 @ 3'	1H03001-14	Soil	07/28/21 14:46	08-02-2021 14:15
S-10 @ 5'	1H03001-15	Soil	07/28/21 14:47	08-02-2021 14:15
S-10 @ 10'	1H03001-16	Soil	07/28/21 14:48	08-02-2021 14:15
S-9 @ 1'	1H03001-17	Soil	07/29/21 08:30	08-02-2021 14:15
S-9 @ 3'	1H03001-18	Soil	07/29/21 08:31	08-02-2021 14:15
S-9 @ 5'	1H03001-19	Soil	07/29/21 08:32	08-02-2021 14:15
S-9 @ 10'	1H03001-20	Soil	07/29/21 08:33	08-02-2021 14:15
S-8 @ 1'	1H03001-21	Soil	07/29/21 09:15	08-02-2021 14:15
S-8 @ 3'	1H03001-22	Soil	07/29/21 09:16	08-02-2021 14:15
S-8 @ 5'	1H03001-23	Soil	07/29/21 09:17	08-02-2021 14:15
S-8 @ 10'	1H03001-24	Soil	07/29/21 09:18	08-02-2021 14:15
S-7 @ 1'	1H03001-25	Soil	07/29/21 09:50	08-02-2021 14:15
S-7 @ 3'	1H03001-26	Soil	07/29/21 09:51	08-02-2021 14:15
S-7 @ 5'	1H03001-27	Soil	07/29/21 09:52	08-02-2021 14:15
S-7 @ 10'	1H03001-28	Soil	07/29/21 09:53	08-02-2021 14:15
S-6 @ 1'	1H03001-29	Soil	07/29/21 10:50	08-02-2021 14:15
S-6 @ 3'	1H03001-30	Soil	07/29/21 10:51	08-02-2021 14:15
S-6 @ 5'	1H03001-31	Soil	07/29/21 10:52	08-02-2021 14:15
S-6 @ 10'	1H03001-32	Soil	07/29/21 10:53	08-02-2021 14:15
S-5 @ 1'	1H03001-33	Soil	07/29/21 12:45	08-02-2021 14:15
S-5 @ 3'	1H03001-34	Soil	07/29/21 12:46	08-02-2021 14:15

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-5 @ 5'	1H03001-35	Soil	07/29/21 12:47	08-02-2021 14:15
S-5 @ 10'	1H03001-36	Soil	07/29/21 12:48	08-02-2021 14:15
S-4 @ 1'	1H03001-37	Soil	07/29/21 14:20	08-02-2021 14:15
S-4 @ 3'	1H03001-38	Soil	07/29/21 14:21	08-02-2021 14:15
S-4 @ 5'	1H03001-39	Soil	07/29/21 14:22	08-02-2021 14:15
S-4 @ 10'	1H03001-40	Soil	07/29/21 14:45	08-02-2021 14:15
S-3 @ 1'	1H03001-41	Soil	07/30/21 09:30	08-02-2021 14:15
S-3 @ 3'	1H03001-42	Soil	07/30/21 09:31	08-02-2021 14:15
S-3 @ 5'	1H03001-43	Soil	07/30/21 09:32	08-02-2021 14:15
S-3 @ 10'	1H03001-44	Soil	07/30/21 09:33	08-02-2021 14:15
S-2 @ 1'	1H03001-45	Soil	07/30/21 10:20	08-02-2021 14:15
S-2 @ 3'	1H03001-46	Soil	07/30/21 10:21	08-02-2021 14:15
S-2 @ 5'	1H03001-47	Soil	07/30/21 10:22	08-02-2021 14:15
S-2 @ 10'	1H03001-48	Soil	07/30/21 10:23	08-02-2021 14:15
S-1 @ 1'	1H03001-49	Soil	07/30/21 11:15	08-02-2021 14:15
S-1 @ 3'	1H03001-50	Soil	07/30/21 11:16	08-02-2021 14:15
S-1 @ 5'	1H03001-51	Soil	07/30/21 11:17	08-02-2021 14:15
S-1 @ 10'	1H03001-52	Soil	07/30/21 11:18	08-02-2021 14:15

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-13 @ 1'

1H03001-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:20	EPA 8021B	
Toluene	**0.00131**	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:20	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:20	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:20	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 17:20*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*117 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 17:20*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4220**	5.75	mg/kg dry	5	P1H1211	08/12/21 15:39	08/13/21 08:14	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 18:46	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 18:46	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 18:46	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.2 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 18:46*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 18:46*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 18:46	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-13 @ 3'

1H03001-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:41	EPA 8021B	
Toluene	**0.00150**	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:41	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:41	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:41	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 17:41	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 17:41*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 17:41*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7530**	11.1	mg/kg dry	10	P1H1211	08/12/21 15:39	08/13/21 08:29	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:09	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:09	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:09	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.9 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 19:09*	*TPH 8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 19:09*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 19:09	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-13 @ 5'

1H03001-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:03	EPA 8021B	
Toluene	**0.00149**	0.00109	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:03	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:03	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:03	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:03	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 18:03*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*115 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 18:03*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6430**	10.9	mg/kg dry	10	P1H1211	08/12/21 15:39	08/13/21 08:44	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:31	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:31	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:31	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.9 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 19:31*	*TPH 8015M*	
Surrogate: o-Terphenyl		*107 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 19:31*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 19:31	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-13 @ 10'

1H03001-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:24	EPA 8021B	
Toluene	**0.00190**	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:24	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:24	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:24	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:24	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 18:24*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*117 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 18:24*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**70.9**	1.11	mg/kg dry	1	P1H1211	08/12/21 15:39	08/13/21 09:12	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:54	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:54	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 19:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.3 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 19:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 19:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 19:54	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-12 @ 1'

1H03001-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:45	EPA 8021B	
Toluene	**0.00195**	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:45	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:45	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:45	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 18:45	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 18:45*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 18:45*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1880**	5.68	mg/kg dry	5	P1H1211	08/12/21 15:39	08/13/21 09:58	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 20:16	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 20:16	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 20:16	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 20:16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 20:16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 20:16	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-12 @ 3'

1H03001-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:06	EPA 8021B	
Toluene	**0.00131**	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:06	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:06	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:06	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:06	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*111 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 19:06*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*120 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 19:06*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10800**	11.5	mg/kg dry	10	P1H1211	08/12/21 15:39	08/13/21 10:44	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 20:39	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 20:39	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 20:39	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 20:39*	*TPH 8015M*	
Surrogate: o-Terphenyl		*114 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 20:39*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 20:39	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-12 @ 5'

1H03001-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00127	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:27	EPA 8021B	
Toluene	**0.00410**	0.00127	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:27	EPA 8021B	
Ethylbenzene	ND	0.00127	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:27	EPA 8021B	
Xylene (p/m)	ND	0.00253	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:27	EPA 8021B	
Xylene (o)	ND	0.00127	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:27	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 19:27*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*115 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 19:27*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12400**	31.6	mg/kg dry	25	P1H1211	08/12/21 15:39	08/13/21 10:59	EPA 300.0	
% Moisture	**21.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	31.6	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:01	TPH 8015M	
>C12-C28	ND	31.6	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:01	TPH 8015M	
>C28-C35	ND	31.6	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:01	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 21:01*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 21:01*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	31.6	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 21:01	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-12 @ 10'

1H03001-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:48	EPA 8021B	
Toluene	**0.00197**	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:48	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:48	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:48	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 19:48	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 19:48*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*114 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 19:48*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**295**	1.14	mg/kg dry	1	P1H1211	08/12/21 15:39	08/13/21 11:15	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:23	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:23	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:23	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 21:23*	*TPH 8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 21:23*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 21:23	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-11 @ 1'

1H03001-09 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:09	EPA 8021B	
Toluene	**0.00333**	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:09	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:09	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:09	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:09	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 20:09*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 20:09*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1370**	5.56	mg/kg dry	5	P1H1211	08/12/21 15:39	08/13/21 13:48	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:46	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:46	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 21:46	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 21:46*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 21:46*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 21:46	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-11 @ 3'

1H03001-10 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:30	EPA 8021B	
Toluene	**0.00501**	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:30	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:30	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:30	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 20:30	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 20:30*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*117 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 20:30*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11400**	11.5	mg/kg dry	10	P1H1211	08/12/21 15:39	08/13/21 11:45	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 22:08	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 22:08	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 22:08	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 22:08*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 22:08*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 22:08	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-11 @ 5'

1H03001-11 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00119	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:32	EPA 8021B	
Toluene	**0.00158**	0.00119	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:32	EPA 8021B	
Ethylbenzene	ND	0.00119	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:32	EPA 8021B	
Xylene (p/m)	ND	0.00238	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:32	EPA 8021B	
Xylene (o)	ND	0.00119	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:32	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 21:32*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 21:32*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11500**	29.8	mg/kg dry	25	P1H1211	08/12/21 15:39	08/13/21 12:01	EPA 300.0	
% Moisture	**16.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:15	TPH 8015M	
>C12-C28	ND	29.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:15	TPH 8015M	
>C28-C35	ND	29.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:15	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 23:15*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 23:15*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.8	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 23:15	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-11 @ 10'

1H03001-12 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:53	EPA 8021B	
Toluene	**0.00285**	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:53	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:53	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:53	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 21:53	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*119 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 21:53*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*111 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 21:53*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**214**	1.12	mg/kg dry	1	P1H1211	08/12/21 15:39	08/13/21 12:16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:37	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:37	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:37	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 23:37*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 23:37*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 23:37	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-10 @ 1'

1H03001-13 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:13	EPA 8021B	
Toluene	**0.00173**	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:13	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:13	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:13	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 22:13*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*118 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 22:13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2850**	11.1	mg/kg dry	10	P1H1211	08/12/21 15:39	08/13/21 14:03	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:59	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:59	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/08/21 23:59	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 23:59*	*TPH 8015M*	
Surrogate: o-Terphenyl		*117 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/08/21 23:59*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:50	08/08/21 23:59	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-10 @ 3'

1H03001-14 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00118	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:34	EPA 8021B	
Toluene	**0.00120**	0.00118	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:34	EPA 8021B	
Ethylbenzene	ND	0.00118	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:34	EPA 8021B	
Xylene (p/m)	ND	0.00235	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:34	EPA 8021B	
Xylene (o)	ND	0.00118	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:34	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*111 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 22:34*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*99.7 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 22:34*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10000**	11.8	mg/kg dry	10	P1H1211	08/12/21 15:39	08/13/21 12:47	EPA 300.0	
% Moisture	**15.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 00:22	TPH 8015M	
>C12-C28	ND	29.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 00:22	TPH 8015M	
>C28-C35	ND	29.4	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 00:22	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 00:22*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 00:22*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.4	mg/kg dry	1	[CALC]	08/05/21 14:50	08/09/21 00:22	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-10 @ 5'

1H03001-15 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:54	EPA 8021B	
Toluene	**0.00475**	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:54	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:54	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:54	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 22:54	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 22:54*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*118 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 22:54*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11200**	28.1	mg/kg dry	25	P1H1302	08/13/21 10:41	08/13/21 20:46	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 00:44	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 00:44	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 00:44	TPH 8015M	
Surrogate: 1-Chlorooctane		*107 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 00:44*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 00:44*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	08/05/21 14:50	08/09/21 00:44	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-10 @ 10'

1H03001-16 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:15	EPA 8021B	
Toluene	**0.00203**	0.00104	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:15	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:15	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:15	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:15	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 23:15*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*116 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 23:15*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**66.7**	1.04	mg/kg dry	1	P1H1302	08/13/21 10:41	08/13/21 21:42	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:06	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:06	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:06	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 01:06*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 01:06*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	08/05/21 14:50	08/09/21 01:06	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-9 @ 1'

1H03001-17 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:35	EPA 8021B	
Toluene	**0.00138**	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:35	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:35	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:35	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:35	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 23:35*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 23:35*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**915**	1.11	mg/kg dry	1	P1H1302	08/13/21 10:41	08/13/21 22:00	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:29	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:29	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:29	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 01:29*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 01:29*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:50	08/09/21 01:29	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-9 @ 3'

1H03001-18 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:56	EPA 8021B	
Toluene	**0.00233**	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:56	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:56	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:56	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0303	08/03/21 14:16	08/03/21 23:56	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 23:56*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/03/21 23:56*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5770**	5.56	mg/kg dry	5	P1H1302	08/13/21 10:41	08/13/21 22:19	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:51	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:51	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 01:51	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 01:51*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 01:51*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:50	08/09/21 01:51	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-9 @ 5'

1H03001-19 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00116	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:16	EPA 8021B	
Toluene	**0.00177**	0.00116	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:16	EPA 8021B	
Ethylbenzene	ND	0.00116	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:16	EPA 8021B	
Xylene (p/m)	ND	0.00233	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:16	EPA 8021B	
Xylene (o)	ND	0.00116	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:16	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*118 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/04/21 00:16*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/04/21 00:16*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**964**	1.16	mg/kg dry	1	P1H1302	08/13/21 10:41	08/13/21 22:37	EPA 300.0	
% Moisture	**14.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 02:13	TPH 8015M	
>C12-C28	ND	29.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 02:13	TPH 8015M	
>C28-C35	ND	29.1	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 02:13	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 02:13*	*TPH 8015M*	
Surrogate: o-Terphenyl		*112 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 02:13*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	08/05/21 14:50	08/09/21 02:13	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-9 @ 10'

1H03001-20 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:37	EPA 8021B	
Toluene	**0.00179**	0.00106	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:37	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:37	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:37	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1H0303	08/03/21 14:16	08/04/21 00:37	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/04/21 00:37*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0303*	*08/03/21 14:16*	*08/04/21 00:37*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**191**	1.06	mg/kg dry	1	P1H1302	08/13/21 10:41	08/13/21 22:56	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 02:35	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 02:35	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1H0513	08/05/21 14:50	08/09/21 02:35	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 02:35*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1H0513*	*08/05/21 14:50*	*08/09/21 02:35*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	08/05/21 14:50	08/09/21 02:35	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-8 @ 1'

1H03001-21 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:23	EPA 8021B	
Toluene	**0.00200**	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:23	EPA 8021B	
Ethylbenzene	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:23	EPA 8021B	
Xylene (p/m)	ND	0.00238	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:23	EPA 8021B	
Xylene (o)	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:23	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 03:23*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 03:23*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11700**	29.8	mg/kg dry	25	P1H1302	08/13/21 10:41	08/13/21 23:14	EPA 300.0	
% Moisture	**16.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:13	TPH 8015M	
>C12-C28	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:13	TPH 8015M	
>C28-C35	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:13	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.1 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 14:13*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 14:13*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.8	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 14:13	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-8 @ 3'

1H03001-22 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:44	EPA 8021B	
Toluene	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:44	EPA 8021B	
Ethylbenzene	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:44	EPA 8021B	
Xylene (p/m)	ND	0.00238	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:44	EPA 8021B	
Xylene (o)	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 03:44	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 03:44*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 03:44*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**14800**	29.8	mg/kg dry	25	P1H1302	08/13/21 10:41	08/13/21 23:33	EPA 300.0	
% Moisture	**16.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:36	TPH 8015M	
>C12-C28	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:36	TPH 8015M	
>C28-C35	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:36	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 14:36*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 14:36*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.8	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 14:36	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-8 @ 5'

1H03001-23 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:05	EPA 8021B	
Toluene	**0.00177**	0.00115	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:05	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:05	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:05	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:05	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 04:05*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 04:05*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4590**	5.75	mg/kg dry	5	P1H1302	08/13/21 10:41	08/13/21 23:51	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:58	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:58	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 14:58	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 14:58*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 14:58*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 14:58	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-8 @ 10'

1H03001-24 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:26	EPA 8021B	
Toluene	**0.00131**	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:26	EPA 8021B	
Ethylbenzene	ND	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:26	EPA 8021B	
Xylene (p/m)	ND	0.00233	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:26	EPA 8021B	
Xylene (o)	ND	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:26	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*115 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 04:26*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 04:26*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**215**	1.16	mg/kg dry	1	P1H1302	08/13/21 10:41	08/14/21 00:10	EPA 300.0	
% Moisture	**14.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 15:21	TPH 8015M	
>C12-C28	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 15:21	TPH 8015M	
>C28-C35	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 15:21	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 15:21*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 15:21*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 15:21	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-7 @ 1'

1H03001-25 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:47	EPA 8021B	
Toluene	**0.00212**	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:47	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:47	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:47	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 04:47	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*116 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 04:47*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 04:47*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**804**	1.11	mg/kg dry	1	P1H1302	08/13/21 10:41	08/14/21 01:05	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 15:44	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 15:44	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 15:44	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 15:44*	*TPH 8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 15:44*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 15:44	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-7 @ 3'

1H03001-26 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:07	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:07	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:07	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:07	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:07	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 05:07*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 05:07*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5170**	5.62	mg/kg dry	5	P1H1302	08/13/21 10:41	08/14/21 02:01	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:07	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:07	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:07	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 16:07*	*TPH 8015M*	
Surrogate: o-Terphenyl		*107 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 16:07*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 16:07	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-7 @ 5'

1H03001-27 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:28	EPA 8021B	
Toluene	**0.00149**	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:28	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:28	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:28	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:28	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*99.4 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 05:28*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*111 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 05:28*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4590**	5.38	mg/kg dry	5	P1H1302	08/13/21 10:41	08/14/21 02:20	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:30	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:30	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:30	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 16:30*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 16:30*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 16:30	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-7 @ 10'

1H03001-28 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:49	EPA 8021B	
Toluene	**0.00188**	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:49	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:49	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:49	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 05:49	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 05:49*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 05:49*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**298**	1.08	mg/kg dry	1	P1H1302	08/13/21 10:41	08/14/21 02:38	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:52	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:52	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 16:52	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.1 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 16:52*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 16:52*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 16:52	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-6 @ 1'

1H03001-29 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:10	EPA 8021B	
Toluene	**0.00274**	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:10	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:10	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:10	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:10	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*118 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 06:10*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 06:10*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6000**	11.0	mg/kg dry	10	P1H1302	08/13/21 10:41	08/14/21 02:57	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 17:15	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 17:15	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 17:15	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 17:15*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 17:15*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 17:15	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-6 @ 3'

1H03001-30 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:31	EPA 8021B	
Toluene	**0.00181**	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:31	EPA 8021B	
Ethylbenzene	ND	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:31	EPA 8021B	
Xylene (p/m)	ND	0.00233	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:31	EPA 8021B	
Xylene (o)	ND	0.00116	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 06:31	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*118 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 06:31*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 06:31*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10300**	11.6	mg/kg dry	10	P1H1302	08/13/21 10:41	08/14/21 03:15	EPA 300.0	
% Moisture	**14.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 17:38	TPH 8015M	
>C12-C28	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 17:38	TPH 8015M	
>C28-C35	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 17:38	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 17:38*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 17:38*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 17:38	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-6 @ 5'

1H03001-31 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:33	EPA 8021B	
Toluene	**0.00245**	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:33	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:33	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:33	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:33	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*115 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 07:33*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 07:33*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6940**	11.0	mg/kg dry	10	P1H1302	08/13/21 10:41	08/14/21 03:34	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 18:46	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 18:46	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 18:46	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 18:46*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 18:46*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 18:46	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-6 @ 10'

1H03001-32 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:54	EPA 8021B	
Toluene	**0.00240**	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:54	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:54	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:54	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 07:54	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*116 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 07:54*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 07:54*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**720**	1.12	mg/kg dry	1	P1H1302	08/13/21 10:41	08/14/21 09:36	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:09	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:09	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:09	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 19:09*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 19:09*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 19:09	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-5 @ 1'

1H03001-33 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:15	EPA 8021B	
Toluene	**0.00164**	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:15	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:15	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:15	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:15	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 08:15*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 08:15*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6440**	11.2	mg/kg dry	10	P1H1302	08/13/21 10:41	08/14/21 09:55	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:32	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:32	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:32	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 19:32*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 19:32*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 19:32	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-5 @ 3'

1H03001-34 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:36	EPA 8021B	
Toluene	**0.00623**	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:36	EPA 8021B	
Ethylbenzene	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:36	EPA 8021B	
Xylene (p/m)	ND	0.00238	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:36	EPA 8021B	
Xylene (o)	ND	0.00119	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:36	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*118 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 08:36*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 08:36*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**13600**	29.8	mg/kg dry	25	P1H1302	08/13/21 10:41	08/14/21 10:13	EPA 300.0	
% Moisture	**16.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:55	TPH 8015M	
>C12-C28	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:55	TPH 8015M	
>C28-C35	ND	29.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 19:55	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 19:55*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 19:55*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.8	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 19:55	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-5 @ 5'

1H03001-35 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00120	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:57	EPA 8021B	
Toluene	**0.00193**	0.00120	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:57	EPA 8021B	
Ethylbenzene	ND	0.00120	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:57	EPA 8021B	
Xylene (p/m)	ND	0.00241	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:57	EPA 8021B	
Xylene (o)	ND	0.00120	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 08:57	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 08:57*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 08:57*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**514**	6.02	mg/kg dry	5	P1H1303	08/13/21 10:51	08/13/21 16:10	EPA 300.0	
% Moisture	**17.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	30.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 20:17	TPH 8015M	
>C12-C28	ND	30.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 20:17	TPH 8015M	
>C28-C35	ND	30.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 20:17	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 20:17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*107 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 20:17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	30.1	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 20:17	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-5 @ 10'

1H03001-36 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:17	EPA 8021B	
Toluene	**0.00481**	0.00102	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:17	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:17	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:17	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 09:17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 09:17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**93.9**	1.02	mg/kg dry	1	P1H1303	08/13/21 10:51	08/13/21 16:56	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 20:40	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 20:40	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 20:40	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 20:40*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 20:40*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 20:40	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-4 @ 1'

1H03001-37 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:38	EPA 8021B	
Toluene	**0.00321**	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:38	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:38	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:38	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1H0304	08/03/21 14:20	08/04/21 09:38	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*114 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 09:38*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*		*P1H0304*	*08/03/21 14:20*	*08/04/21 09:38*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8580**	11.1	mg/kg dry	10	P1H1303	08/13/21 10:51	08/13/21 17:11	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:03	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:03	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:03	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 21:03*	*TPH 8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 21:03*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 21:03	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-4 @ 3'

1H03001-38 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 16:52	EPA 8021B	
Toluene	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 16:52	EPA 8021B	
Ethylbenzene	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 16:52	EPA 8021B	
Xylene (p/m)	ND	0.00233	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 16:52	EPA 8021B	
Xylene (o)	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 16:52	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*105 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 16:52*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*95.2 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 16:52*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12800**	29.1	mg/kg dry	25	P1H1303	08/13/21 10:51	08/13/21 17:27	EPA 300.0	
% Moisture	**14.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:25	TPH 8015M	
>C12-C28	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:25	TPH 8015M	
>C28-C35	ND	29.1	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:25	TPH 8015M	
Surrogate: 1-Chlorooctane		*103 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 21:25*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 21:25*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 21:25	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-4 @ 5'

1H03001-39 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00125	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:13	EPA 8021B	
Toluene	**0.00654**	0.00125	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:13	EPA 8021B	
Ethylbenzene	ND	0.00125	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:13	EPA 8021B	
Xylene (p/m)	ND	0.00250	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:13	EPA 8021B	
Xylene (o)	ND	0.00125	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*113 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 17:13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*115 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 17:13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3410**	6.25	mg/kg dry	5	P1H1303	08/13/21 10:51	08/13/21 17:42	EPA 300.0	
% Moisture	**20.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	31.2	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:48	TPH 8015M	
>C12-C28	ND	31.2	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:48	TPH 8015M	
>C28-C35	ND	31.2	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 21:48	TPH 8015M	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 21:48*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 21:48*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	31.2	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 21:48	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-4 @ 10'

1H03001-40 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:35	EPA 8021B	
Toluene	**0.00537**	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:35	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:35	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:35	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:35	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 17:35*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 17:35*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**140**	1.06	mg/kg dry	1	P1H1303	08/13/21 10:51	08/13/21 17:57	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 22:10	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 22:10	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1H0514	08/05/21 14:20	08/07/21 22:10	TPH 8015M	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 22:10*	*TPH 8015M*	
Surrogate: o-Terphenyl		*114 %*	*70-130*		*P1H0514*	*08/05/21 14:20*	*08/07/21 22:10*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	08/05/21 14:20	08/07/21 22:10	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-3 @ 1'

1H03001-41 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:56	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:56	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:56	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:56	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 17:56	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 17:56*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*108 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 17:56*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7660**	11.2	mg/kg dry	10	P1H1303	08/13/21 10:51	08/13/21 18:12	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:10	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:10	TPH 8015M	
>C28-C35	**43.5**	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:10	TPH 8015M	
Surrogate: 1-Chlorooctane		*112 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 01:10*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 01:10*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**43.5**	28.1	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 01:10	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-3 @ 3'

1H03001-42 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:17	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:17	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:17	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:17	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 18:17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 18:17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8230**	11.2	mg/kg dry	10	P1H1303	08/13/21 10:51	08/13/21 18:28	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:32	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:32	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:32	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 01:32*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 01:32*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 01:32	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-3 @ 5'

1H03001-43 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:38	EPA 8021B	
Toluene	**0.00183**	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:38	EPA 8021B	
Ethylbenzene	ND	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:38	EPA 8021B	
Xylene (p/m)	ND	0.00238	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:38	EPA 8021B	
Xylene (o)	ND	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:38	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 18:38*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*111 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 18:38*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**14600**	29.8	mg/kg dry	25	P1H1303	08/13/21 10:51	08/13/21 18:43	EPA 300.0	
% Moisture	**16.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.8	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:54	TPH 8015M	
>C12-C28	ND	29.8	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:54	TPH 8015M	
>C28-C35	ND	29.8	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 01:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 01:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 01:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.8	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 01:54	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-3 @ 10'

1H03001-44 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:59	EPA 8021B	
Toluene	**0.00610**	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:59	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:59	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:59	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 18:59	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 18:59*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 18:59*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**433**	1.15	mg/kg dry	1	P1H1303	08/13/21 10:51	08/13/21 18:58	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 02:17	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 02:17	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 02:17	TPH 8015M	
Surrogate: 1-Chlorooctane		*117 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 02:17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 02:17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 02:17	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-2 @ 1'

1H03001-45 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:21	EPA 8021B	
Toluene	ND	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:21	EPA 8021B	
Ethylbenzene	ND	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:21	EPA 8021B	
Xylene (p/m)	ND	0.00238	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:21	EPA 8021B	
Xylene (o)	ND	0.00119	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*109 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 19:21*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 19:21*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12100**	29.8	mg/kg dry	25	P1H1303	08/13/21 10:51	08/13/21 19:44	EPA 300.0	
% Moisture	**16.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.8	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 02:39	TPH 8015M	
>C12-C28	ND	29.8	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 02:39	TPH 8015M	
>C28-C35	ND	29.8	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 02:39	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 02:39*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 02:39*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.8	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 02:39	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-2 @ 3'

1H03001-46 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:42	EPA 8021B	
Toluene	**0.00148**	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:42	EPA 8021B	
Ethylbenzene	ND	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:42	EPA 8021B	
Xylene (p/m)	ND	0.00241	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:42	EPA 8021B	
Xylene (o)	ND	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 19:42	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*110 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 19:42*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 19:42*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**14400**	30.1	mg/kg dry	25	P1H1303	08/13/21 10:51	08/13/21 20:30	EPA 300.0	
% Moisture	**17.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	30.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:01	TPH 8015M	
>C12-C28	ND	30.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:01	TPH 8015M	
>C28-C35	ND	30.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:01	TPH 8015M	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 03:01*	*TPH 8015M*	
Surrogate: o-Terphenyl		*114 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 03:01*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	30.1	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 03:01	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-2 @ 5'

1H03001-47 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 20:03	EPA 8021B	
Toluene	**0.00458**	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 20:03	EPA 8021B	
Ethylbenzene	ND	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 20:03	EPA 8021B	
Xylene (p/m)	ND	0.00241	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 20:03	EPA 8021B	
Xylene (o)	ND	0.00120	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 20:03	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*112 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 20:03*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*112 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 20:03*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11500**	30.1	mg/kg dry	25	P1H1303	08/13/21 10:51	08/13/21 20:45	EPA 300.0	
% Moisture	**17.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	30.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:23	TPH 8015M	
>C12-C28	ND	30.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:23	TPH 8015M	
>C28-C35	ND	30.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:23	TPH 8015M	
Surrogate: 1-Chlorooctane		*116 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 03:23*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 03:23*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	30.1	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 03:23	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-2 @ 10'

1H03001-48 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:06	EPA 8021B	
Toluene	**0.00315**	0.00108	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:06	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:06	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:06	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:06	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 21:06*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*108 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 21:06*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**263**	1.08	mg/kg dry	1	P1H1303	08/13/21 10:51	08/13/21 21:01	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:46	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:46	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 03:46	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 03:46*	*TPH 8015M*	
Surrogate: o-Terphenyl		*115 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 03:46*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 03:46	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-1 @ 1'

1H03001-49 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:26	EPA 8021B	
Toluene	**0.00198**	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:26	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:26	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:26	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:26	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 21:26*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*108 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 21:26*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9910**	11.2	mg/kg dry	10	P1H1303	08/13/21 10:51	08/13/21 21:16	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 04:08	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 04:08	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 04:08	TPH 8015M	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 04:08*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 04:08*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 04:08	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-1 @ 3'

1H03001-50 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:47	EPA 8021B	
Toluene	**0.00264**	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:47	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:47	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:47	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 21:47	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 21:47*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 21:47*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12800**	28.7	mg/kg dry	25	P1H1303	08/13/21 10:51	08/13/21 21:31	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 04:30	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 04:30	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 04:30	TPH 8015M	
Surrogate: 1-Chlorooctane		*111 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 04:30*	*TPH 8015M*	
Surrogate: o-Terphenyl		*110 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 04:30*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 04:30	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-1 @ 5'

1H03001-51 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:08	EPA 8021B	
Toluene	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:08	EPA 8021B	
Ethylbenzene	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:08	EPA 8021B	
Xylene (p/m)	ND	0.00233	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:08	EPA 8021B	
Xylene (o)	ND	0.00116	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:08	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 22:08*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*111 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 22:08*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8570**	11.6	mg/kg dry	10	P1H1303	08/13/21 10:51	08/13/21 21:47	EPA 300.0	
% Moisture	**14.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	29.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 05:38	TPH 8015M	
>C12-C28	ND	29.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 05:38	TPH 8015M	
>C28-C35	ND	29.1	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 05:38	TPH 8015M	
Surrogate: 1-Chlorooctane		*110 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 05:38*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 05:38*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	29.1	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 05:38	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-1 @ 10'

1H03001-52 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:29	EPA 8021B	
Toluene	**0.00452**	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:29	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:29	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:29	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1H0604	08/06/21 11:12	08/06/21 22:29	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*108 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 22:29*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*		*P1H0604*	*08/06/21 11:12*	*08/06/21 22:29*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**124**	1.06	mg/kg dry	1	P1H1303	08/13/21 10:51	08/13/21 22:02	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1H0417	08/04/21 15:46	08/04/21 15:51	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 06:00	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 06:00	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1H0610	08/06/21 12:00	08/08/21 06:00	TPH 8015M	
Surrogate: 1-Chlorooctane		*120 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 06:00*	*TPH 8015M*	
Surrogate: o-Terphenyl		*121 %*	*70-130*		*P1H0610*	*08/06/21 12:00*	*08/08/21 06:00*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	08/06/21 12:00	08/08/21 06:00	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0303 - * DEFAULT PREP *** **										
Blank (P1H0303-BLK1)				Prepared & Analyzed: 08/03/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.114*		*"*	*0.120*		*95.0*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.131*		*"*	*0.120*		*109*	*80-120*			
LCS (P1H0303-BS1)				Prepared & Analyzed: 08/03/21						
Benzene	0.106	0.00100	mg/kg wet	0.100		106	70-130			
Toluene	0.106	0.00100	"	0.100		106	70-130			
Ethylbenzene	0.106	0.00100	"	0.100		106	70-130			
Xylene (p/m)	0.223	0.00200	"	0.200		112	70-130			
Xylene (o)	0.0935	0.00100	"	0.100		93.5	70-130			
Surrogate: 4-Bromofluorobenzene	*0.106*		*"*	*0.120*		*88.3*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.0*	*80-120*			
LCS Dup (P1H0303-BSD1)				Prepared & Analyzed: 08/03/21						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	70-130	1.36	20	
Toluene	0.105	0.00100	"	0.100		105	70-130	1.10	20	
Ethylbenzene	0.105	0.00100	"	0.100		105	70-130	1.19	20	
Xylene (p/m)	0.221	0.00200	"	0.200		110	70-130	1.13	20	
Xylene (o)	0.0927	0.00100	"	0.100		92.7	70-130	0.784	20	
Surrogate: 4-Bromofluorobenzene	*0.107*		*"*	*0.120*		*89.1*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*98.9*	*80-120*			
Calibration Blank (P1H0303-CCB1)				Prepared & Analyzed: 08/03/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.132*		*"*	*0.120*		*110*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.114*		*"*	*0.120*		*95.4*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0303 - * DEFAULT PREP *** **										
Calibration Blank (P1H0303-CCB2)				Prepared & Analyzed: 08/03/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.117*		*"*	*0.120*		*97.1*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.131*		*"*	*0.120*		*109*	*80-120*			
Calibration Check (P1H0303-CCV1)				Prepared & Analyzed: 08/03/21						
Benzene	0.0971	0.00100	mg/kg wet	0.100		97.1	80-120			
Toluene	0.0919	0.00100	"	0.100		91.9	80-120			
Ethylbenzene	0.0936	0.00100	"	0.100		93.6	80-120			
Xylene (p/m)	0.188	0.00200	"	0.200		93.9	80-120			
Xylene (o)	0.0819	0.00100	"	0.100		81.9	80-120			
Surrogate: 4-Bromofluorobenzene	*0.107*		*"*	*0.120*		*89.3*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*98.8*	*75-125*			
Calibration Check (P1H0303-CCV2)				Prepared & Analyzed: 08/03/21						
Benzene	0.106	0.00100	mg/kg wet	0.100		106	80-120			
Toluene	0.100	0.00100	"	0.100		100	80-120			
Ethylbenzene	0.101	0.00100	"	0.100		101	80-120			
Xylene (p/m)	0.207	0.00200	"	0.200		103	80-120			
Xylene (o)	0.0934	0.00100	"	0.100		93.4	80-120			
Surrogate: 4-Bromofluorobenzene	*0.117*		*"*	*0.120*		*97.3*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.123*		*"*	*0.120*		*103*	*75-125*			
Calibration Check (P1H0303-CCV3)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120			
Toluene	0.0987	0.00100	"	0.100		98.7	80-120			
Ethylbenzene	0.0970	0.00100	"	0.100		97.0	80-120			
Xylene (p/m)	0.202	0.00200	"	0.200		101	80-120			
Xylene (o)	0.0929	0.00100	"	0.100		92.9	80-120			
Surrogate: 4-Bromofluorobenzene	*0.112*		*"*	*0.120*		*93.2*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.120*		*"*	*0.120*		*100*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0303 - * DEFAULT PREP *** **										
Matrix Spike (P1H0303-MS1)	**Source: 1H03001-01**			Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.101	0.00115	mg/kg dry	0.115	ND	87.6	80-120			
Toluene	0.0979	0.00115	"	0.115	0.00131	84.0	80-120			
Ethylbenzene	0.0971	0.00115	"	0.115	ND	84.4	80-120			
Xylene (p/m)	0.195	0.00230	"	0.230	ND	85.0	80-120			
Xylene (o)	0.0867	0.00115	"	0.115	ND	75.5	80-120			QM-07
Surrogate: 1,4-Difluorobenzene	*0.147*		"	*0.138*		*107*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.144*		"	*0.138*		*104*	*80-120*			
Matrix Spike Dup (P1H0303-MSD1)	**Source: 1H03001-01**			Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.0954	0.00115	mg/kg dry	0.115	ND	83.0	80-120	5.37	20	
Toluene	0.0935	0.00115	"	0.115	0.00131	80.2	80-120	4.62	20	
Ethylbenzene	0.0931	0.00115	"	0.115	ND	81.0	80-120	4.13	20	
Xylene (p/m)	0.181	0.00230	"	0.230	ND	78.9	80-120	7.44	20	QM-07
Xylene (o)	0.0838	0.00115	"	0.115	ND	72.9	80-120	3.40	20	QM-07
Surrogate: 4-Bromofluorobenzene	*0.138*		"	*0.138*		*99.9*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.144*		"	*0.138*		*104*	*80-120*			
Batch P1H0304 - * DEFAULT PREP *** **										
Blank (P1H0304-BLK1)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.117*		"	*0.120*		*97.8*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.131*		"	*0.120*		*109*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0304 - * DEFAULT PREP *** **										
LCS (P1H0304-BS1)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.100	0.00100	mg/kg wet	0.100		100	70-130			
Toluene	0.0996	0.00100	"	0.100		99.6	70-130			
Ethylbenzene	0.101	0.00100	"	0.100		101	70-130			
Xylene (p/m)	0.212	0.00200	"	0.200		106	70-130			
Xylene (o)	0.0931	0.00100	"	0.100		93.1	70-130			
Surrogate: 4-Bromofluorobenzene	*0.117*		*"*	*0.120*		*97.9*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.124*		*"*	*0.120*		*103*	*80-120*			
LCS Dup (P1H0304-BSD1)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.0891	0.00100	mg/kg wet	0.100		89.1	70-130	11.8	20	
Toluene	0.0890	0.00100	"	0.100		89.0	70-130	11.2	20	
Ethylbenzene	0.0900	0.00100	"	0.100		90.0	70-130	11.8	20	
Xylene (p/m)	0.188	0.00200	"	0.200		94.1	70-130	12.0	20	
Xylene (o)	0.0833	0.00100	"	0.100		83.3	70-130	11.2	20	
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.111*		*"*	*0.120*		*92.8*	*80-120*			
Calibration Blank (P1H0304-CCB1)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.131*		*"*	*0.120*		*109*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.116*		*"*	*0.120*		*96.8*	*80-120*			
Calibration Blank (P1H0304-CCB2)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.132*		*"*	*0.120*		*110*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.114*		*"*	*0.120*		*95.4*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0304 - * DEFAULT PREP *** **										
Calibration Check (P1H0304-CCV1)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120			
Toluene	0.0987	0.00100	"	0.100		98.7	80-120			
Ethylbenzene	0.0970	0.00100	"	0.100		97.0	80-120			
Xylene (p/m)	0.202	0.00200	"	0.200		101	80-120			
Xylene (o)	0.0929	0.00100	"	0.100		92.9	80-120			
Surrogate: 4-Bromofluorobenzene	*0.112*		"	*0.120*		*93.2*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*100*	*75-125*			
Calibration Check (P1H0304-CCV2)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.103	0.00100	mg/kg wet	0.100		103	80-120			
Toluene	0.0975	0.00100	"	0.100		97.5	80-120			
Ethylbenzene	0.0963	0.00100	"	0.100		96.3	80-120			
Xylene (p/m)	0.200	0.00200	"	0.200		100	80-120			
Xylene (o)	0.0911	0.00100	"	0.100		91.1	80-120			
Surrogate: 1,4-Difluorobenzene	*0.121*		"	*0.120*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.112*		"	*0.120*		*93.5*	*75-125*			
Calibration Check (P1H0304-CCV3)				Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.103	0.00100	mg/kg wet	0.100		103	80-120			
Toluene	0.0982	0.00100	"	0.100		98.2	80-120			
Ethylbenzene	0.0960	0.00100	"	0.100		96.0	80-120			
Xylene (p/m)	0.193	0.00200	"	0.200		96.7	80-120			
Xylene (o)	0.0897	0.00100	"	0.100		89.7	80-120			
Surrogate: 4-Bromofluorobenzene	*0.113*		"	*0.120*		*93.9*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.121*		"	*0.120*		*101*	*75-125*			
Matrix Spike (P1H0304-MS1)		**Source: 1H03001-21**		Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.0900	0.00119	mg/kg dry	0.119	ND	75.6	80-120			QM-07
Toluene	0.0857	0.00119	"	0.119	0.00200	70.3	80-120			QM-07
Ethylbenzene	0.0621	0.00119	"	0.119	ND	52.2	80-120			QM-07
Xylene (p/m)	0.178	0.00238	"	0.238	ND	75.0	80-120			QM-07
Xylene (o)	0.0805	0.00119	"	0.119	ND	67.6	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	*0.141*		"	*0.143*		*98.4*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.146*		"	*0.143*		*102*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0304 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1H0304-MSD1)	**Source: 1H03001-21**			Prepared: 08/03/21 Analyzed: 08/04/21						
Benzene	0.0912	0.00119	mg/kg dry	0.119	ND	76.6	80-120	1.35	20	QM-07
Toluene	0.0866	0.00119	"	0.119	0.00200	71.1	80-120	1.13	20	QM-07
Ethylbenzene	0.0631	0.00119	"	0.119	ND	53.0	80-120	1.58	20	QM-07
Xylene (p/m)	0.182	0.00238	"	0.238	ND	76.3	80-120	1.75	20	QM-07
Xylene (o)	0.0818	0.00119	"	0.119	ND	68.7	80-120	1.61	20	QM-07
Surrogate: 1,4-Difluorobenzene	*0.143*		*"*	*0.143*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.136*		*"*	*0.143*		*95.4*	*80-120*			
Batch P1H0604 - * DEFAULT PREP *** **										
Blank (P1H0604-BLK1)				Prepared & Analyzed: 08/06/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.126*		*"*	*0.120*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.116*		*"*	*0.120*		*96.4*	*80-120*			
LCS (P1H0604-BS1)				Prepared & Analyzed: 08/06/21						
Benzene	0.0868	0.00100	mg/kg wet	0.100		86.8	70-130			
Toluene	0.0992	0.00100	"	0.100		99.2	70-130			
Ethylbenzene	0.104	0.00100	"	0.100		104	70-130			
Xylene (p/m)	0.222	0.00200	"	0.200		111	70-130			
Xylene (o)	0.0964	0.00100	"	0.100		96.4	70-130			
Surrogate: 1,4-Difluorobenzene	*0.121*		*"*	*0.120*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.113*		*"*	*0.120*		*94.4*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0604 - * DEFAULT PREP *** **										
LCS Dup (P1H0604-BSD1)				Prepared & Analyzed: 08/06/21						
Benzene	0.0839	0.00100	mg/kg wet	0.100		83.9	70-130	3.35	20	
Toluene	0.0943	0.00100	"	0.100		94.3	70-130	5.02	20	
Ethylbenzene	0.100	0.00100	"	0.100		100	70-130	3.81	20	
Xylene (p/m)	0.214	0.00200	"	0.200		107	70-130	3.70	20	
Xylene (o)	0.0903	0.00100	"	0.100		90.3	70-130	6.55	20	
Surrogate: 4-Bromofluorobenzene	*0.108*		"	*0.120*		*90.4*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.4*	*80-120*			
Calibration Blank (P1H0604-CCB1)				Prepared & Analyzed: 08/06/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	1.24		"							
Xylene (o)	0.640		"							
Surrogate: 4-Bromofluorobenzene	*0.119*		"	*0.120*		*98.8*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.124*		"	*0.120*		*104*	*80-120*			
Calibration Blank (P1H0604-CCB2)				Prepared & Analyzed: 08/06/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	1.03		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.126*		"	*0.120*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.119*		"	*0.120*		*99.2*	*80-120*			
Calibration Check (P1H0604-CCV1)				Prepared & Analyzed: 08/06/21						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	80-120			
Toluene	0.111	0.00100	"	0.100		111	80-120			
Ethylbenzene	0.102	0.00100	"	0.100		102	80-120			
Xylene (p/m)	0.234	0.00200	"	0.200		117	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	*0.126*		"	*0.120*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*103*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0604 - * DEFAULT PREP *** **										
Calibration Check (P1H0604-CCV2)				Prepared & Analyzed: 08/06/21						
Benzene	0.0977	0.00100	mg/kg wet	0.100		97.7	80-120			
Toluene	0.101	0.00100	"	0.100		101	80-120			
Ethylbenzene	0.0928	0.00100	"	0.100		92.8	80-120			
Xylene (p/m)	0.210	0.00200	"	0.200		105	80-120			
Xylene (o)	0.0946	0.00100	"	0.100		94.6	80-120			
Surrogate: 4-Bromofluorobenzene	*0.117*		"	*0.120*		*97.3*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.122*		"	*0.120*		*102*	*75-125*			
Calibration Check (P1H0604-CCV3)				Prepared: 08/06/21 Analyzed: 08/07/21						
Benzene	0.0977	0.00100	mg/kg wet	0.100		97.7	80-120			
Toluene	0.101	0.00100	"	0.100		101	80-120			
Ethylbenzene	0.0923	0.00100	"	0.100		92.3	80-120			
Xylene (p/m)	0.211	0.00200	"	0.200		106	80-120			
Xylene (o)	0.0956	0.00100	"	0.100		95.6	80-120			
Surrogate: 4-Bromofluorobenzene	*0.114*		"	*0.120*		*95.2*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.122*		"	*0.120*		*102*	*75-125*			
Matrix Spike (P1H0604-MS1)	**Source: 1H03001-38**			Prepared: 08/06/21 Analyzed: 08/07/21						
Benzene	0.0807	0.00116	mg/kg dry	0.116	ND	69.4	80-120			QM-07
Toluene	0.0483	0.00116	"	0.116	ND	41.5	80-120			QM-07
Ethylbenzene	0.0549	0.00116	"	0.116	ND	47.2	80-120			QM-07
Xylene (p/m)	0.120	0.00233	"	0.233	ND	51.7	80-120			QM-07
Xylene (o)	0.0825	0.00116	"	0.116	ND	70.9	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	*0.135*		"	*0.140*		*97.0*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.141*		"	*0.140*		*101*	*80-120*			
Matrix Spike Dup (P1H0604-MSD1)	**Source: 1H03001-38**			Prepared: 08/06/21 Analyzed: 08/07/21						
Benzene	0.0850	0.00116	mg/kg dry	0.116	ND	73.1	80-120	5.28	20	QM-07
Toluene	0.0512	0.00116	"	0.116	ND	44.0	80-120	5.87	20	QM-07
Ethylbenzene	0.0554	0.00116	"	0.116	ND	47.7	80-120	0.885	20	QM-07
Xylene (p/m)	0.122	0.00233	"	0.233	ND	52.3	80-120	1.22	20	QM-07
Xylene (o)	0.0843	0.00116	"	0.116	ND	72.5	80-120	2.20	20	QM-07
Surrogate: 1,4-Difluorobenzene	*0.148*		"	*0.140*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.144*		"	*0.140*		*103*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0417 - * DEFAULT PREP *** **										
Blank (P1H0417-BLK1)				Prepared & Analyzed: 08/04/21						
% Moisture	ND	0.1	%							
Blank (P1H0417-BLK2)				Prepared & Analyzed: 08/04/21						
% Moisture	ND	0.1	%							
Blank (P1H0417-BLK3)				Prepared & Analyzed: 08/04/21						
% Moisture	ND	0.1	%							
Blank (P1H0417-BLK4)				Prepared & Analyzed: 08/04/21						
% Moisture	ND	0.1	%							
Duplicate (P1H0417-DUP1)	**Source: 1H03004-06**			Prepared & Analyzed: 08/04/21						
% Moisture	9.0	0.1	%		9.0			0.00	20	
Duplicate (P1H0417-DUP2)	**Source: 1H03004-16**			Prepared & Analyzed: 08/04/21						
% Moisture	6.0	0.1	%		6.0			0.00	20	
Duplicate (P1H0417-DUP3)	**Source: 1H02005-01**			Prepared & Analyzed: 08/04/21						
% Moisture	6.0	0.1	%		3.0			66.7	20	R3
Duplicate (P1H0417-DUP4)	**Source: 1H03001-10**			Prepared & Analyzed: 08/04/21						
% Moisture	13.0	0.1	%		13.0			0.00	20	
Duplicate (P1H0417-DUP5)	**Source: 1H03001-25**			Prepared & Analyzed: 08/04/21						
% Moisture	10.0	0.1	%		10.0			0.00	20	
Duplicate (P1H0417-DUP6)	**Source: 1H03001-35**			Prepared & Analyzed: 08/04/21						
% Moisture	17.0	0.1	%		17.0			0.00	20	

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Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0417 - * DEFAULT PREP *** **										
Duplicate (P1H0417-DUP7)	**Source: 1H03001-50**			Prepared & Analyzed: 08/04/21						
% Moisture	15.0	0.1	%		13.0			14.3	20	
Duplicate (P1H0417-DUP8)	**Source: 1H03003-08**			Prepared & Analyzed: 08/04/21						
% Moisture	6.0	0.1	%		6.0			0.00	20	
Batch P1H1211 - * DEFAULT PREP *** **										
Blank (P1H1211-BLK1)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1H1211-BS1)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	412	1.00	mg/kg wet	400		103	90-110			
LCS Dup (P1H1211-BSD1)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	413	1.00	mg/kg wet	400		103	90-110	0.332	20	
Calibration Blank (P1H1211-CCB1)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1H1211-CCB2)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1H1211-CCV1)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	19.8		mg/kg	20.0		99.1	90-110			
Calibration Check (P1H1211-CCV2)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	20.5		mg/kg	20.0		102	90-110			

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Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H1211 - * DEFAULT PREP *** **										
Calibration Check (P1H1211-CCV3)				Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	19.8		mg/kg	20.0		99.2	90-110			
Matrix Spike (P1H1211-MS1)		**Source: 1H02001-09**		Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	694	1.39	mg/kg dry	694	36.4	94.7	80-120			
Matrix Spike (P1H1211-MS2)		**Source: 1H03001-05**		Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	2430	5.68	mg/kg dry	568	1880	97.9	80-120			
Matrix Spike Dup (P1H1211-MSD1)		**Source: 1H02001-09**		Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	674	1.39	mg/kg dry	694	36.4	91.8	80-120	3.00	20	
Matrix Spike Dup (P1H1211-MSD2)		**Source: 1H03001-05**		Prepared: 08/12/21 Analyzed: 08/13/21						
Chloride	2450	5.68	mg/kg dry	568	1880	100	80-120	0.519	20	
Batch P1H1302 - * DEFAULT PREP *** **										
Blank (P1H1302-BLK1)				Prepared & Analyzed: 08/13/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1H1302-BS1)				Prepared & Analyzed: 08/13/21						
Chloride	414	1.00	mg/kg wet	400		104	90-110			
LCS Dup (P1H1302-BSD1)				Prepared & Analyzed: 08/13/21						
Chloride	414	1.00	mg/kg wet	400		104	90-110	0.0193	20	
Calibration Blank (P1H1302-CCB1)				Prepared & Analyzed: 08/13/21						
Chloride	-0.164		mg/kg wet							

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P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H1302 - * DEFAULT PREP *** **										
Calibration Blank (P1H1302-CCB2)				Prepared: 08/13/21 Analyzed: 08/14/21						
Chloride	-0.165		mg/kg wet							
Calibration Check (P1H1302-CCV1)				Prepared & Analyzed: 08/13/21						
Chloride	20.1		mg/kg	20.0		100	90-110			
Calibration Check (P1H1302-CCV2)				Prepared: 08/13/21 Analyzed: 08/14/21						
Chloride	20.1		mg/kg	20.0		100	90-110			
Calibration Check (P1H1302-CCV3)				Prepared: 08/13/21 Analyzed: 08/14/21						
Chloride	20.2		mg/kg	20.0		101	90-110			
Matrix Spike (P1H1302-MS1)		**Source: 1H03001-15**		Prepared & Analyzed: 08/13/21						
Chloride	13600	28.1	mg/kg dry	2810	11200	85.3	80-120			
Matrix Spike (P1H1302-MS2)		**Source: 1H03001-25**		Prepared: 08/13/21 Analyzed: 08/14/21						
Chloride	1180	1.11	mg/kg dry	556	804	67.2	80-120			QM-05
Matrix Spike Dup (P1H1302-MSD1)		**Source: 1H03001-15**		Prepared & Analyzed: 08/13/21						
Chloride	13700	28.1	mg/kg dry	2810	11200	90.4	80-120	1.04	20	
Matrix Spike Dup (P1H1302-MSD2)		**Source: 1H03001-25**		Prepared: 08/13/21 Analyzed: 08/14/21						
Chloride	1190	1.11	mg/kg dry	556	804	68.6	80-120	0.640	20	QM-05
Batch P1H1303 - * DEFAULT PREP *** **										
Blank (P1H1303-BLK1)				Prepared & Analyzed: 08/13/21						
Chloride	ND	1.00	mg/kg wet							

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Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H1303 - * DEFAULT PREP *** **										
LCS (P1H1303-BS1)				Prepared & Analyzed: 08/13/21						
Chloride	408	1.00	mg/kg wet	400		102	90-110			
LCS Dup (P1H1303-BSD1)				Prepared & Analyzed: 08/13/21						
Chloride	410	1.00	mg/kg wet	400		103	90-110	0.565	20	
Calibration Blank (P1H1303-CCB1)				Prepared & Analyzed: 08/13/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1H1303-CCB2)				Prepared & Analyzed: 08/13/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1H1303-CCV1)				Prepared & Analyzed: 08/13/21						
Chloride	20.0		mg/kg	20.0		100	90-110			
Calibration Check (P1H1303-CCV2)				Prepared & Analyzed: 08/13/21						
Chloride	19.7		mg/kg	20.0		98.3	90-110			
Calibration Check (P1H1303-CCV3)				Prepared & Analyzed: 08/13/21						
Chloride	19.8		mg/kg	20.0		99.2	90-110			
Matrix Spike (P1H1303-MS1)		**Source: 1H03001-35**		Prepared & Analyzed: 08/13/21						
Chloride	1160	6.02	mg/kg dry	602	514	107	80-120			
Matrix Spike (P1H1303-MS2)		**Source: 1H03001-45**		Prepared & Analyzed: 08/13/21						
Chloride	14700	29.8	mg/kg dry	2980	12100	89.0	80-120			
Matrix Spike Dup (P1H1303-MSD1)		**Source: 1H03001-35**		Prepared & Analyzed: 08/13/21						
Chloride	1140	6.02	mg/kg dry	602	514	104	80-120	1.57	20	

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Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H1303 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1H1303-MSD2)	**Source: 1H03001-45**			Prepared & Analyzed: 08/13/21						
Chloride	15000	29.8	mg/kg dry	2980	12100	97.2	80-120	1.64	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0513 - TX 1005										
Blank (P1H0513-BLK1)				Prepared: 08/05/21 Analyzed: 08/08/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*96.7*		"	*100*		*96.7*	*70-130*			
Surrogate: o-Terphenyl	*52.0*		"	*50.0*		*104*	*70-130*			
LCS (P1H0513-BS1)				Prepared: 08/05/21 Analyzed: 08/08/21						
C6-C12	994	25.0	mg/kg wet	1000		99.4	75-125			
>C12-C28	836	25.0	"	1000		83.6	75-125			
Surrogate: 1-Chlorooctane	*97.0*		"	*100*		*97.0*	*70-130*			
Surrogate: o-Terphenyl	*54.7*		"	*50.0*		*109*	*70-130*			
LCS Dup (P1H0513-BSD1)				Prepared: 08/05/21 Analyzed: 08/08/21						
C6-C12	978	25.0	mg/kg wet	1000		97.8	75-125	1.59	20	
>C12-C28	828	25.0	"	1000		82.8	75-125	0.952	20	
Surrogate: 1-Chlorooctane	*95.7*		"	*100*		*95.7*	*70-130*			
Surrogate: o-Terphenyl	*54.5*		"	*50.0*		*109*	*70-130*			
Calibration Check (P1H0513-CCV1)				Prepared: 08/05/21 Analyzed: 08/08/21						
C6-C12	486	25.0	mg/kg wet	500		97.2	85-115			
>C12-C28	449	25.0	"	500		89.9	85-115			
Surrogate: 1-Chlorooctane	*112*		"	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*52.5*		"	*50.0*		*105*	*70-130*			
Calibration Check (P1H0513-CCV2)				Prepared: 08/05/21 Analyzed: 08/08/21						
C6-C12	533	25.0	mg/kg wet	500		107	85-115			
>C12-C28	505	25.0	"	500		101	85-115			
Surrogate: 1-Chlorooctane	*121*		"	*100*		*121*	*70-130*			
Surrogate: o-Terphenyl	*57.3*		"	*50.0*		*115*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0513 - TX 1005										
Calibration Check (P1H0513-CCV3)				Prepared: 08/05/21 Analyzed: 08/09/21						
C6-C12	546	25.0	mg/kg wet	500		109	85-115			
>C12-C28	521	25.0	"	500		104	85-115			
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*58.1*		*"*	*50.0*		*116*	*70-130*			
Matrix Spike (P1H0513-MS1)		**Source: 1H03001-20**		Prepared: 08/05/21 Analyzed: 08/09/21						
C6-C12	1090	26.6	mg/kg dry	1060	16.2	101	75-125			
>C12-C28	928	26.6	"	1060	ND	87.3	75-125			
Surrogate: 1-Chlorooctane	*129*		*"*	*106*		*121*	*70-130*			
Surrogate: o-Terphenyl	*61.8*		*"*	*53.2*		*116*	*70-130*			
Matrix Spike Dup (P1H0513-MSD1)		**Source: 1H03001-20**		Prepared: 08/05/21 Analyzed: 08/09/21						
C6-C12	1140	26.6	mg/kg dry	1060	16.2	105	75-125	3.76	20	
>C12-C28	951	26.6	"	1060	ND	89.4	75-125	2.37	20	
Surrogate: 1-Chlorooctane	*107*		*"*	*106*		*101*	*70-130*			
Surrogate: o-Terphenyl	*61.3*		*"*	*53.2*		*115*	*70-130*			
Batch P1H0514 - TX 1005										
Blank (P1H0514-BLK1)				Prepared: 08/05/21 Analyzed: 08/07/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*104*		*"*	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*52.2*		*"*	*50.0*		*104*	*70-130*			
LCS (P1H0514-BS1)				Prepared: 08/05/21 Analyzed: 08/07/21						
C6-C12	993	25.0	mg/kg wet	1000		99.3	75-125			
>C12-C28	964	25.0	"	1000		96.4	75-125			
Surrogate: 1-Chlorooctane	*108*		*"*	*100*		*108*	*70-130*			
Surrogate: o-Terphenyl	*60.3*		*"*	*50.0*		*121*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0514 - TX 1005										
LCS Dup (P1H0514-BSD1)				Prepared: 08/05/21 Analyzed: 08/07/21						
C6-C12	1010	25.0	mg/kg wet	1000		101	75-125	1.64	20	
>C12-C28	997	25.0	"	1000		99.7	75-125	3.34	20	
Surrogate: 1-Chlorooctane	*109*		"	*100*		*109*	*70-130*			
Surrogate: o-Terphenyl	*58.3*		"	*50.0*		*117*	*70-130*			
Calibration Check (P1H0514-CCV1)				Prepared: 08/05/21 Analyzed: 08/07/21						
C6-C12	448	25.0	mg/kg wet	500		89.7	85-115			
>C12-C28	495	25.0	"	500		98.9	85-115			
Surrogate: 1-Chlorooctane	*116*		"	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*52.1*		"	*50.0*		*104*	*70-130*			
Calibration Check (P1H0514-CCV2)				Prepared: 08/05/21 Analyzed: 08/07/21						
C6-C12	499	25.0	mg/kg wet	500		99.9	85-115			
>C12-C28	553	25.0	"	500		111	85-115			
Surrogate: 1-Chlorooctane	*125*		"	*100*		*125*	*70-130*			
Surrogate: o-Terphenyl	*56.6*		"	*50.0*		*113*	*70-130*			
Matrix Spike (P1H0514-MS1)		**Source: 1H03001-40**		Prepared: 08/05/21 Analyzed: 08/07/21						
C6-C12	1080	26.6	mg/kg dry	1060	ND	101	75-125			
>C12-C28	1080	26.6	"	1060	12.6	99.9	75-125			
Surrogate: 1-Chlorooctane	*108*		"	*106*		*101*	*70-130*			
Surrogate: o-Terphenyl	*57.7*		"	*53.2*		*108*	*70-130*			
Matrix Spike Dup (P1H0514-MSD1)		**Source: 1H03001-40**		Prepared: 08/05/21 Analyzed: 08/07/21						
C6-C12	1080	26.6	mg/kg dry	1060	ND	101	75-125	0.0630	20	
>C12-C28	1040	26.6	"	1060	12.6	96.1	75-125	3.86	20	
Surrogate: 1-Chlorooctane	*107*		"	*106*		*101*	*70-130*			
Surrogate: o-Terphenyl	*57.9*		"	*53.2*		*109*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0610 - TX 1005										
Blank (P1H0610-BLK1)				Prepared: 08/06/21 Analyzed: 08/08/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*118*		"	*100*		*118*	*70-130*			
Surrogate: o-Terphenyl	*59.2*		"	*50.0*		*118*	*70-130*			
LCS (P1H0610-BS1)				Prepared: 08/06/21 Analyzed: 08/08/21						
C6-C12	1130	25.0	mg/kg wet	1000		113	75-125			
>C12-C28	1100	25.0	"	1000		110	75-125			
Surrogate: 1-Chlorooctane	*122*		"	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*64.8*		"	*50.0*		*130*	*70-130*			
LCS Dup (P1H0610-BSD1)				Prepared: 08/06/21 Analyzed: 08/08/21						
C6-C12	1140	25.0	mg/kg wet	1000		114	75-125	1.41	20	
>C12-C28	1130	25.0	"	1000		113	75-125	2.27	20	
Surrogate: 1-Chlorooctane	*123*		"	*100*		*123*	*70-130*			
Surrogate: o-Terphenyl	*60.4*		"	*50.0*		*121*	*70-130*			
Calibration Check (P1H0610-CCV1)				Prepared: 08/06/21 Analyzed: 08/07/21						
C6-C12	564	25.0	mg/kg wet	500		113	85-115			
>C12-C28	555	25.0	"	500		111	85-115			
Surrogate: 1-Chlorooctane	*119*		"	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*61.5*		"	*50.0*		*123*	*70-130*			
Calibration Check (P1H0610-CCV2)				Prepared: 08/06/21 Analyzed: 08/08/21						
C6-C12	575	25.0	mg/kg wet	500		115	85-115			
>C12-C28	571	25.0	"	500		114	85-115			
Surrogate: 1-Chlorooctane	*121*		"	*100*		*121*	*70-130*			
Surrogate: o-Terphenyl	*59.7*		"	*50.0*		*119*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1H0610 - TX 1005										
Matrix Spike (P1H0610-MS1)	**Source: 1H03001-52**			Prepared: 08/06/21 Analyzed: 08/08/21						
C6-C12	1130	26.6	mg/kg dry	1060	16.0	104	75-125			
>C12-C28	1120	26.6	"	1060	17.5	104	75-125			
Surrogate: 1-Chlorooctane	*116*		*"*	*106*		*109*	*70-130*			
Surrogate: o-Terphenyl	*57.9*		*"*	*53.2*		*109*	*70-130*			
Matrix Spike Dup (P1H0610-MSD1)	**Source: 1H03001-52**			Prepared: 08/06/21 Analyzed: 08/08/21						
C6-C12	1120	26.6	mg/kg dry	1060	16.0	104	75-125	0.919	20	
>C12-C28	1110	26.6	"	1060	17.5	102	75-125	1.25	20	
Surrogate: 1-Chlorooctane	*116*		*"*	*106*		*109*	*70-130*			
Surrogate: o-Terphenyl	*62.1*		*"*	*53.2*		*117*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

ROI	Received on Ice
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 8/19/2021

Brent Barron, Laboratory Director/Technical Director

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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If you have received this material in error, please notify us immediately at 432-686-7235.

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№ 1370

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 7/30/2021 PAGE 1 OF 4

PO#: LAB WORK ORDER#: 1H03001

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG/MB

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State: MST/NM

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
S-13 1'	1	7/28/21	1230	S	1				X		X			X	X	X													X	
S-13 3'	2		1231																											
S-13 5'	3		1232																											
S-13 10'	4		1233																											
S-12 1'	5		1250																											
S-12 3'	6		1251																											
S-12 5'	7		1252																											
S-12 10'	8		1253																											
S-11 1'	9		1340																											
S-11 3'	10		1341																											
S-11 5'	11		1342																											
S-11 10'	12		1343																											
S-10 1'	13		1445																											
S-10 3'	14		1446																											
S-10 5'	15		1447																											

TOTAL 15

RELINQUISHED BY:(Signature) Sandra Calderone DATE/TIME 8/2/21 2:15 RECEIVED BY:(Signature) Tina Bledsoe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 7.1 8.1 THERM#: CF#1 L2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 8/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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№1372

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 7/30/2021 PAGE 2 OF 4

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG/MB

Data Reported to:

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State: MST/NM

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
S-10 10'	16	7/28/21	1448	S	1				X		X		X	X	X													X	
S-9 1'	17	7/29/21	0830																										
S-9 3'	18		0831																										
S-9 5'	19		0832																										
S-9 10'	20		0833																										
S-8 1'	21		0915																										
S-8 3'	22		0916																										
S-8 5'	23		0917																										
S-8 10'	24		0918																										
S-7 1'	25		0950																										
S-7 3'	26		0951																										
S-7 5'	27		0952																										
S-7 10'	28		0953																										
S-6 1'	29		1050																										
S-6 3'	30		1051																										
TOTAL	5																												

RELINQUISHED BY:(Signature) DATE/TIME 8/2/21 2:15 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 7.1 8.1 THERM#: CF1 C2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Page 177 of 904

№ 1373

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 7/30/2021 PAGE 3 OF 4

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0165-04 COLLECTOR: DSG/MB

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TBLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
S-6 5'	31	7/29/21	1052	S	1				X		X			X	X	X													X		
S-6 10'	32		1053																												
S-5 1'	33		1245																												
S-5 3'	34		1246																												
S-5 5'	35		1247																												
S-5 10'	36		1248																												
S-4 1'	37		1420																												
S-4 3'	38		1421																												
S-4 5'	39		1422																												
S-4 10'	40		1445																												
S-3 1'	41	7/30/21	0930																												
S-3 3'	42		0931																												
S-3 5'	43		0932																												
S-3 10'	44		0933																												
S-2 1'	45		1020																												

TOTAL 15

RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
Kendal Collins	8/2/21 2:15	Alina Bledsoe
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 7.1 8.1 THERM#: CF4 C2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:31 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Page 178 of 904

Nº 1374

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 200
Midland, TX 79701
432-687-0901

DATE: 7/30/2021 PAGE 4 OF 4

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG / MB

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State:

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES	FIELD NOTES
S-2 3'	46	7/30/21	1021	S	1				X		X	
S-2 5'	47		1022									
S-2 10'	48		1023									
S-1 1'	49		1115									
S-1 3'	50		1116									
S-1 5'	51		1117									
S-1 10'	52		1118									

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TBLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

TOTAL 7

RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)	TURN AROUND TIME
	8/2/21 2:15		NORMAL ☒
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)	1 DAY ☐
			2 DAY ☐
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)	OTHER ☐

LABORATORY: PBEL

LABORATORY USE ONLY:
RECEIVING TEMP: 7.1 8.1 THERM#: CF#1 12
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Confirmation Soil Samples

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW

Project Number: 21-0105-04

Location: NM

Lab Order Number: 1J19003

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 10/28/21

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1	1J19003-01	Soil	10/18/21 10:01	10-19-2021 10:01
B-2	1J19003-02	Soil	10/18/21 10:02	10-19-2021 10:01
B-3	1J19003-03	Soil	10/18/21 10:03	10-19-2021 10:01
B-4	1J19003-04	Soil	10/18/21 10:04	10-19-2021 10:01
B-5	1J19003-05	Soil	10/18/21 10:05	10-19-2021 10:01
B-6	1J19003-06	Soil	10/18/21 10:06	10-19-2021 10:01
B-7	1J19003-07	Soil	10/18/21 10:07	10-19-2021 10:01
B-8	1J19003-08	Soil	10/18/21 10:08	10-19-2021 10:01
B-9	1J19003-09	Soil	10/18/21 10:09	10-19-2021 10:01
B-10	1J19003-10	Soil	10/18/21 10:10	10-19-2021 10:01
B-11	1J19003-11	Soil	10/18/21 10:11	10-19-2021 10:01
B-12	1J19003-12	Soil	10/18/21 10:12	10-19-2021 10:01
B-13	1J19003-13	Soil	10/18/21 10:13	10-19-2021 10:01
B-14	1J19003-14	Soil	10/18/21 10:14	10-19-2021 10:01
B-15	1J19003-15	Soil	10/18/21 10:15	10-19-2021 10:01
B-16	1J19003-16	Soil	10/18/21 10:16	10-19-2021 10:01
B-17	1J19003-17	Soil	10/18/21 10:17	10-19-2021 10:01
B-18	1J19003-18	Soil	10/18/21 10:18	10-19-2021 10:01
B-19	1J19003-19	Soil	10/18/21 10:19	10-19-2021 10:01
B-20	1J19003-20	Soil	10/18/21 10:20	10-19-2021 10:01
B-21	1J19003-21	Soil	10/18/21 10:21	10-19-2021 10:01
B-22	1J19003-22	Soil	10/18/21 10:22	10-19-2021 10:01
B-23	1J19003-23	Soil	10/18/21 10:23	10-19-2021 10:01
B-24	1J19003-24	Soil	10/18/21 10:24	10-19-2021 10:01
B-25	1J19003-25	Soil	10/18/21 10:25	10-19-2021 10:01
B-26	1J19003-26	Soil	10/18/21 10:26	10-19-2021 10:01
B-27	1J19003-27	Soil	10/18/21 10:27	10-19-2021 10:01
B-28	1J19003-28	Soil	10/18/21 10:28	10-19-2021 10:01
B-29	1J19003-29	Soil	10/18/21 10:29	10-19-2021 10:01
B-30	1J19003-30	Soil	10/18/21 10:30	10-19-2021 10:01
B-31	1J19003-31	Soil	10/18/21 10:31	10-19-2021 10:01
B-32	1J19003-32	Soil	10/18/21 10:32	10-19-2021 10:01
B-33	1J19003-33	Soil	10/18/21 10:33	10-19-2021 10:01
B-34	1J19003-34	Soil	10/18/21 10:34	10-19-2021 10:01

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-35	1J19003-35	Soil	10/18/21 10:35	10-19-2021 10:01
B-36	1J19003-36	Soil	10/18/21 10:36	10-19-2021 10:01
B-37	1J19003-37	Soil	10/18/21 10:37	10-19-2021 10:01
B-38	1J19003-38	Soil	10/18/21 10:38	10-19-2021 10:01
B-39	1J19003-39	Soil	10/18/21 10:39	10-19-2021 10:01
B-40	1J19003-40	Soil	10/18/21 10:40	10-19-2021 10:01
B-41	1J19003-41	Soil	10/18/21 10:41	10-19-2021 10:01
B-42	1J19003-42	Soil	10/18/21 10:42	10-19-2021 10:01
B-43	1J19003-43	Soil	10/18/21 10:43	10-19-2021 10:01
B-44	1J19003-44	Soil	10/18/21 10:44	10-19-2021 10:01
B-45	1J19003-45	Soil	10/18/21 10:45	10-19-2021 10:01
B-46	1J19003-46	Soil	10/18/21 10:46	10-19-2021 10:01
B-47	1J19003-47	Soil	10/18/21 10:47	10-19-2021 10:01
B-48	1J19003-48	Soil	10/18/21 10:48	10-19-2021 10:01
B-49	1J19003-49	Soil	10/18/21 10:49	10-19-2021 10:01
B-50	1J19003-50	Soil	10/18/21 10:50	10-19-2021 10:01
B-51	1J19003-51	Soil	10/18/21 10:51	10-19-2021 10:01
B-52	1J19003-52	Soil	10/18/21 10:52	10-19-2021 10:01
B-53	1J19003-53	Soil	10/18/21 10:53	10-19-2021 10:01
B-54	1J19003-54	Soil	10/18/21 10:54	10-19-2021 10:01
B-55	1J19003-55	Soil	10/18/21 10:55	10-19-2021 10:01
B-56	1J19003-56	Soil	10/18/21 10:56	10-19-2021 10:01
B-57	1J19003-57	Soil	10/18/21 10:57	10-19-2021 10:01
B-58	1J19003-58	Soil	10/18/21 10:58	10-19-2021 10:01
B-59	1J19003-59	Soil	10/18/21 10:59	10-19-2021 10:01
B-60	1J19003-60	Soil	10/18/21 11:00	10-19-2021 10:01
B-61	1J19004-01	Soil	10/18/21 11:01	10-19-2021 10:01
B-62	1J19004-02	Soil	10/18/21 11:02	10-19-2021 10:01
B-63	1J19004-03	Soil	10/18/21 11:03	10-19-2021 10:01
B-64	1J19004-04	Soil	10/18/21 11:04	10-19-2021 10:01
B-65	1J19004-05	Soil	10/18/21 11:05	10-19-2021 10:01
B-66	1J19004-06	Soil	10/18/21 11:06	10-19-2021 10:01
B-67	1J19004-07	Soil	10/18/21 11:07	10-19-2021 10:01
B-68	1J19004-08	Soil	10/18/21 11:08	10-19-2021 10:01

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-69	1J19004-09	Soil	10/18/21 11:09	10-19-2021 10:01
B-70	1J19004-10	Soil	10/18/21 11:10	10-19-2021 10:01
B-71	1J19004-11	Soil	10/18/21 11:11	10-19-2021 10:01
B-72	1J19004-12	Soil	10/18/21 11:12	10-19-2021 10:01
B-73	1J19004-13	Soil	10/18/21 11:13	10-19-2021 10:01
B-74	1J19004-14	Soil	10/18/21 11:14	10-19-2021 10:01
B-75	1J19004-15	Soil	10/18/21 11:15	10-19-2021 10:01
B-77	1J19004-16	Soil	10/18/21 11:17	10-19-2021 10:01
B-78	1J19004-17	Soil	10/18/21 11:18	10-19-2021 10:01
SW-1	1J19004-18	Soil	10/18/21 11:19	10-19-2021 10:01
SW-2	1J19004-19	Soil	10/18/21 11:20	10-19-2021 10:01
SW-3	1J19004-20	Soil	10/18/21 11:21	10-19-2021 10:01
SW-4	1J19004-21	Soil	10/18/21 11:22	10-19-2021 10:01
SW-5	1J19004-22	Soil	10/18/21 11:23	10-19-2021 10:01
SW-6	1J19004-23	Soil	10/18/21 11:24	10-19-2021 10:01
SW-7	1J19004-24	Soil	10/18/21 11:25	10-19-2021 10:01
SW-8	1J19004-25	Soil	10/18/21 11:26	10-19-2021 10:01
SW-9	1J19004-26	Soil	10/18/21 11:27	10-19-2021 10:01
SW-10	1J19004-27	Soil	10/18/21 11:28	10-19-2021 10:01
SW-11	1J19004-28	Soil	10/18/21 11:29	10-19-2021 10:01
SW-12	1J19004-29	Soil	10/18/21 11:30	10-19-2021 10:01
SW-13	1J19004-30	Soil	10/18/21 11:31	10-19-2021 10:01
B-76	1J19004-31	Soil	10/18/21 11:16	10-19-2021 10:01
SW-14	1J19004-32	Soil	10/18/21 11:32	10-19-2021 10:01
SW-15	1J19004-33	Soil	10/18/21 11:33	10-19-2021 10:01
SW-16	1J19004-34	Soil	10/18/21 11:34	10-19-2021 10:01
SW-17	1J19004-35	Soil	10/18/21 11:35	10-19-2021 10:01
SW-18	1J19004-36	Soil	10/18/21 11:36	10-19-2021 10:01
SW-19	1J19004-37	Soil	10/18/21 11:37	10-19-2021 10:01
SW-20	1J19004-38	Soil	10/18/21 11:38	10-19-2021 10:01
SW-21	1J19004-39	Soil	10/18/21 11:39	10-19-2021 10:01
SW-22	1J19004-40	Soil	10/18/21 11:40	10-19-2021 10:01
SW-23	1J19004-41	Soil	10/18/21 11:41	10-19-2021 10:01
SW-24	1J19004-42	Soil	10/18/21 11:42	10-19-2021 10:01

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-25	1J19004-43	Soil	10/18/21 11:43	10-19-2021 10:01
SW-26	1J19004-44	Soil	10/18/21 11:44	10-19-2021 10:01
SW-27	1J19004-45	Soil	10/18/21 11:45	10-19-2021 10:01
SW-28	1J19004-46	Soil	10/18/21 11:46	10-19-2021 10:01
SW-29	1J19004-47	Soil	10/18/21 11:47	10-19-2021 10:01
SW-30	1J19004-48	Soil	10/18/21 11:48	10-19-2021 10:01
SW-31	1J19004-49	Soil	10/18/21 11:49	10-19-2021 10:01
SW-32	1J19004-50	Soil	10/18/21 11:50	10-19-2021 10:01
SW-33	1J19004-51	Soil	10/18/21 11:51	10-19-2021 10:01
SW-34	1J19004-52	Soil	10/18/21 11:52	10-19-2021 10:01
SW-35	1J19004-53	Soil	10/18/21 11:53	10-19-2021 10:01
SW-36	1J19004-54	Soil	10/18/21 11:54	10-19-2021 10:01
SW-37	1J19004-55	Soil	10/18/21 11:55	10-19-2021 10:01
SW-38	1J19004-56	Soil	10/18/21 11:56	10-19-2021 10:01
SW-39	1J19004-57	Soil	10/18/21 11:57	10-19-2021 10:01
SW-40	1J19004-58	Soil	10/18/21 11:58	10-19-2021 10:01
SW-41	1J19004-59	Soil	10/18/21 11:59	10-19-2021 10:01
SW-42	1J19004-60	Soil	10/18/21 12:00	10-19-2021 10:01
SW-43	1J19004-61	Soil	10/18/21 12:01	10-19-2021 10:01
SW-44	1J19004-62	Soil	10/18/21 12:02	10-19-2021 10:01
SW-45	1J19004-63	Soil	10/18/21 12:03	10-19-2021 10:01
SW-46	1J19004-64	Soil	10/18/21 12:04	10-19-2021 10:01
SW-47	1J19004-65	Soil	10/18/21 12:05	10-19-2021 10:01
SW-48	1J19004-66	Soil	10/18/21 12:06	10-19-2021 10:01

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-1

1J19003-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:22	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:22	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:22	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:22	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:22	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 12:22*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*106 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 12:22*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12700**	27.8	mg/kg dry	25	P1J1912	10/19/21 15:50	10/20/21 04:21	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:04	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:04	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:04	TPH 8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 07:04*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 07:04*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 07:04	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-2

1J19003-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:43	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:43	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:43	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:43	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 12:43	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 12:43*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 12:43*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9840**	27.2	mg/kg dry	25	P1J1912	10/19/21 15:50	10/20/21 05:07	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:27	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:27	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:27	TPH 8015M	
Surrogate: 1-Chlorooctane		*77.2 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 07:27*	*TPH 8015M*	
Surrogate: o-Terphenyl		*82.3 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 07:27*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 07:27	calc	

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-3

1J19003-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:04	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:04	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:04	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:04	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:04	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 13:04*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 13:04*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9260**	28.1	mg/kg dry	25	P1J1912	10/19/21 15:50	10/20/21 05:53	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:50	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:50	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 07:50	TPH 8015M	
Surrogate: 1-Chlorooctane		*86.2 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 07:50*	*TPH 8015M*	
Surrogate: o-Terphenyl		*90.9 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 07:50*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 07:50	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1J19003-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:25	EPA 8021B	
Toluene	ND	0.00115	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:25	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:25	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:25	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:25	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 13:25*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*106 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 13:25*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**14100**	28.7	mg/kg dry	25	P1J1912	10/19/21 15:50	10/20/21 06:08	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 08:13	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 08:13	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 08:13	TPH 8015M	
Surrogate: 1-Chlorooctane		*116 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 08:13*	*TPH 8015M*	
Surrogate: o-Terphenyl		*123 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 08:13*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 08:13	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1J19003-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:46	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:46	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:46	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:46	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 13:46	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 13:46*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 13:46*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8660**	28.4	mg/kg dry	25	P1J1912	10/19/21 15:50	10/20/21 06:23	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 08:36	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 08:36	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 08:36	TPH 8015M	
Surrogate: 1-Chlorooctane		*82.7 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 08:36*	*TPH 8015M*	
Surrogate: o-Terphenyl		*86.0 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 08:36*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 08:36	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1J19003-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:08	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:08	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:08	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:08	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:08	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 14:08*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 14:08*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6660**	10.9	mg/kg dry	10	P1J1912	10/19/21 15:50	10/20/21 06:39	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 09:47	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 09:47	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 09:47	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.8 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 09:47*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.0 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 09:47*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 09:47	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1J19003-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:29	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:29	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:29	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:29	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:29	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 14:29*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 14:29*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5650**	11.1	mg/kg dry	10	P1J1912	10/19/21 15:50	10/20/21 06:54	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 10:33	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 10:33	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 10:33	TPH 8015M	
Surrogate: 1-Chlorooctane		*87.2 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 10:33*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.1 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 10:33*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 10:33	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1J19003-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:50	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:50	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:50	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:50	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J1909	10/19/21 13:55	10/20/21 14:50	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*106 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 14:50*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J1909*	*10/19/21 13:55*	*10/20/21 14:50*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5910**	11.0	mg/kg dry	10	P1J1912	10/19/21 15:50	10/20/21 07:09	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 10:55	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 10:55	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2003	10/20/21 11:30	10/22/21 10:55	TPH 8015M	
Surrogate: 1-Chlorooctane		*79.7 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 10:55*	*TPH 8015M*	
Surrogate: o-Terphenyl		*84.6 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/22/21 10:55*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/20/21 11:30	10/22/21 10:55	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1J19003-09 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:03	EPA 8021B	
Toluene	ND	0.00115	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:03	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:03	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:03	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:03	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 19:03*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 19:03*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12200**	28.7	mg/kg dry	25	P1J1912	10/19/21 15:50	10/20/21 07:25	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:07	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:07	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:07	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.1 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 10:07*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.5 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 10:07*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	10/20/21 11:30	10/26/21 10:07	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-10

1J19003-10 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:24	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:24	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:24	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:24	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:24	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 19:24*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 19:24*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6480**	10.9	mg/kg dry	10	P1J1912	10/19/21 15:50	10/20/21 07:40	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:30	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:30	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:30	TPH 8015M	
Surrogate: 1-Chlorooctane		*83.2 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 10:30*	*TPH 8015M*	
Surrogate: o-Terphenyl		*89.0 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 10:30*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	10/20/21 11:30	10/26/21 10:30	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-11

1J19003-11 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:45	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:45	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:45	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:45	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 19:45	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 19:45*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 19:45*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4010**	10.5	mg/kg dry	10	P1J1912	10/19/21 15:50	10/20/21 07:55	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 14:12	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 14:12	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 14:12	TPH 8015M	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 14:12*	*TPH 8015M*	
Surrogate: o-Terphenyl		*122 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 14:12*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/20/21 11:30	10/26/21 14:12	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-12

1J19003-12 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:06	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:06	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:06	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:06	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:06	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 20:06*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 20:06*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8470**	27.8	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 12:53	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:53	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:53	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 10:53	TPH 8015M	
Surrogate: 1-Chlorooctane		*83.5 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 10:53*	*TPH 8015M*	
Surrogate: o-Terphenyl		*89.3 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 10:53*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/20/21 11:30	10/26/21 10:53	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-13

1J19003-13 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:27	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:27	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:27	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:27	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:27	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 20:27*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 20:27*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3630**	10.6	mg/kg dry	10	P1J2002	10/20/21 11:13	10/20/21 13:51	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 11:15	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 11:15	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 11:15	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.0 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 11:15*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.6 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 11:15*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/20/21 11:30	10/26/21 11:15	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-14

1J19003-14 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:48	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:48	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:48	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:48	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 20:48	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 20:48*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 20:48*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3910**	10.8	mg/kg dry	10	P1J2002	10/20/21 11:13	10/20/21 14:10	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 11:38	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 11:38	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 11:38	TPH 8015M	
Surrogate: 1-Chlorooctane		*86.5 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 11:38*	*TPH 8015M*	
Surrogate: o-Terphenyl		*91.9 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 11:38*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/20/21 11:30	10/26/21 11:38	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-15

1J19003-15 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:09	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:09	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:09	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:09	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:09	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 21:09*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 21:09*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4360**	27.5	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 14:29	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 12:01	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 12:01	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2003	10/20/21 11:30	10/26/21 12:01	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.2 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 12:01*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.6 %*	*70-130*		*P1J2003*	*10/20/21 11:30*	*10/26/21 12:01*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/20/21 11:30	10/26/21 12:01	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-16

1J19003-16 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:30	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:30	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:30	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:30	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:30	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 21:30*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 21:30*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7460**	26.6	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 14:48	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:09	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:09	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:09	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/22/21 23:09*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/22/21 23:09*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/20/21 13:00	10/22/21 23:09	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-17

1J19003-17 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:51	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:51	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:51	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:51	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 21:51	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 21:51*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 21:51*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4440**	26.9	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 15:24	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:32	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:32	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:32	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.5 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/22/21 23:32*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/22/21 23:32*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/20/21 13:00	10/22/21 23:32	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-18

1J19003-18 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 22:13	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 22:13	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 22:13	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 22:13	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 22:13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 22:13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 22:13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5720**	27.2	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 15:43	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:55	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:55	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1J2004	10/20/21 13:00	10/22/21 23:55	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.4 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/22/21 23:55*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/22/21 23:55*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	10/20/21 13:00	10/22/21 23:55	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-19

1J19003-19 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:16	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:16	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:16	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:16	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:16	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 23:16*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 23:16*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7100**	26.9	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 16:02	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 00:18	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 00:18	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 00:18	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.3 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 00:18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 00:18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 00:18	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-20

1J19003-20 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:37	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:37	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:37	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:37	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:37	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 23:37*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 23:37*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9980**	28.4	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 16:21	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 00:41	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 00:41	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 00:41	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.9 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 00:41*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 00:41*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 00:41	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-21

1J19003-21 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:58	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:58	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:58	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:58	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/22/21 23:58	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 23:58*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/22/21 23:58*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5080**	10.5	mg/kg dry	10	P1J2002	10/20/21 11:13	10/20/21 16:40	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:04	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:04	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:04	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.2 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 01:04*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.8 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 01:04*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 01:04	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-22

1J19003-22 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:19	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:19	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:19	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:19	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 00:19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 00:19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**13900**	51.5	mg/kg dry	50	P1J2002	10/20/21 11:13	10/20/21 17:37	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:27	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:27	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:27	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.2 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 01:27*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 01:27*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 01:27	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-23

1J19003-23 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:41	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:41	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:41	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:41	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 00:41	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 00:41*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 00:41*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5490**	10.4	mg/kg dry	10	P1J2002	10/20/21 11:13	10/20/21 18:34	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:50	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:50	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 01:50	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.0 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 01:50*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 01:50*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 01:50	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-24

1J19003-24 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:02	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:02	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:02	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:02	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:02	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 01:02*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 01:02*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5610**	10.5	mg/kg dry	10	P1J2002	10/20/21 11:13	10/20/21 18:53	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2007	10/20/21 15:48	10/20/21 15:48	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 02:13	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 02:13	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 02:13	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.3 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 02:13*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 02:13*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 02:13	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-25

1J19003-25 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:23	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:23	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:23	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:23	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:23	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 01:23*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 01:23*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5180**	10.4	mg/kg dry	10	P1J2002	10/20/21 11:13	10/20/21 19:12	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 02:36	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 02:36	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 02:36	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.3 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 02:36*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 02:36*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 02:36	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-26

1J19003-26 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:44	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:44	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:44	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:44	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 01:44	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 01:44*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 01:44*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5370**	10.8	mg/kg dry	10	P1J2002	10/20/21 11:13	10/20/21 19:31	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 03:45	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 03:45	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 03:45	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.1 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 03:45*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 03:45*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 03:45	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-27

1J19003-27 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:05	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:05	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:05	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:05	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:05	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 02:05*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 02:05*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**501**	1.04	mg/kg dry	1	P1J2002	10/20/21 11:13	10/20/21 19:50	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:08	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:08	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:08	TPH 8015M	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 04:08*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 04:08*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 04:08	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-28

1J19003-28 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:26	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:26	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:26	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:26	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2208	10/22/21 14:31	10/23/21 02:26	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 02:26*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2208*	*10/22/21 14:31*	*10/23/21 02:26*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**13500**	51.0	mg/kg dry	50	P1J2002	10/20/21 11:13	10/20/21 20:09	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:32	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:32	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:32	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 04:32*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 04:32*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 04:32	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-29

1J19003-29 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:16	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:16	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:16	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:16	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:16	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 05:16*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 05:16*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**20800**	51.0	mg/kg dry	50	P1J2002	10/20/21 11:13	10/20/21 20:28	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:55	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:55	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 04:55	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.9 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 04:55*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 04:55*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 04:55	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-30

1J19003-30 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:38	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:38	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:38	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:38	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:38	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 05:38*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 05:38*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8030**	25.5	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 20:47	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 05:18	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 05:18	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 05:18	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.5 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 05:18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 05:18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 05:18	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-31

1J19003-31 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:59	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:59	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:59	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:59	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 05:59	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 05:59*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 05:59*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10100**	25.5	mg/kg dry	25	P1J2002	10/20/21 11:13	10/20/21 21:06	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 05:41	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 05:41	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 05:41	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.2 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 05:41*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 05:41*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 05:41	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-32

1J19003-32 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:20	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:20	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:20	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:20	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 06:20*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 06:20*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10200**	27.5	mg/kg dry	25	P1J2101	10/21/21 09:01	10/21/21 10:34	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:05	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:05	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:05	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.1 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 06:05*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.8 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 06:05*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 06:05	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-33

1J19003-33 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00109	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:41	EPA 8021B	
Toluene	ND	0.00109	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:41	EPA 8021B	
Ethylbenzene	ND	0.00109	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:41	EPA 8021B	
Xylene (p/m)	ND	0.00217	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:41	EPA 8021B	
Xylene (o)	ND	0.00109	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 06:41	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 06:41*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 06:41*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4700**	10.9	mg/kg dry	10	P1J2101	10/21/21 09:01	10/21/21 11:20	EPA 300.0	
% Moisture	**8.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.2	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:28	TPH 8015M	
>C12-C28	ND	27.2	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:28	TPH 8015M	
>C28-C35	ND	27.2	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:28	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.1 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 06:28*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 06:28*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.2	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 06:28	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-34

1J19003-34 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:03	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:03	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:03	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:03	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:03	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 07:03*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 07:03*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5690**	10.2	mg/kg dry	10	P1J2101	10/21/21 09:01	10/21/21 11:35	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:51	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:51	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 06:51	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.2 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 06:51*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 06:51*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 06:51	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-35

1J19003-35 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:24	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:24	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:24	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:24	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:24	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 07:24*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 07:24*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8430**	52.1	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 11:50	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 07:15	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 07:15	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2004	10/20/21 13:00	10/23/21 07:15	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.1 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 07:15*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2004*	*10/20/21 13:00*	*10/23/21 07:15*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 13:00	10/23/21 07:15	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-36

1J19003-36 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:45	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:45	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:45	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:45	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 07:45	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 07:45*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 07:45*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6150**	25.3	mg/kg dry	25	P1J2101	10/21/21 09:01	10/21/21 12:06	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 10:44	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 10:44	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 10:44	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.3 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 10:44*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.1 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 10:44*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 10:44	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-37

1J19003-37 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:07	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:07	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:07	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:07	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:07	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 08:07*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 08:07*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4000**	10.3	mg/kg dry	10	P1J2101	10/21/21 09:01	10/21/21 12:21	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:07	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:07	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:07	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.8 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 11:07*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.6 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 11:07*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 11:07	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-38

1J19003-38 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:28	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:28	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:28	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:28	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 08:28	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 08:28*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 08:28*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**24300**	55.6	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 12:36	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:31	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:31	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:31	TPH 8015M	
Surrogate: 1-Chlorooctane		*85.9 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 11:31*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.2 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 11:31*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 11:31	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-39

1J19003-39 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:31	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:31	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:31	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:31	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:31	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 09:31*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 09:31*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12200**	52.1	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 12:52	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:54	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:54	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 11:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.2 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 11:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.4 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 11:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 11:54	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-40

1J19003-40 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:52	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:52	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:52	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:52	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 09:52	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 09:52*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 09:52*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**18600**	52.1	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 13:07	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 12:17	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 12:17	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 12:17	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.3 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 12:17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 12:17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 12:17	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-41

1J19003-41 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:14	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:14	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:14	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:14	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:14	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 10:14*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 10:14*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11100**	51.5	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 13:22	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 12:39	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 12:39	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 12:39	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.5 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 12:39*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.1 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 12:39*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 12:39	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-42

1J19003-42 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:35	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:35	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:35	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:35	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:35	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 10:35*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 10:35*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**13100**	54.9	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 14:08	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:02	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:02	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:02	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.1 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 13:02*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.9 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 13:02*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 13:02	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-43

1J19003-43 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:56	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:56	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:56	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:56	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 10:56	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 10:56*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 10:56*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6950**	26.6	mg/kg dry	25	P1J2101	10/21/21 09:01	10/21/21 14:54	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:25	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:25	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:25	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.8 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 13:25*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 13:25*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 13:25	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-44

1J19003-44 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:17	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:17	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:17	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:17	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 11:17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 11:17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9530**	25.5	mg/kg dry	25	P1J2101	10/21/21 09:01	10/21/21 15:09	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:47	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:47	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 13:47	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.6 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 13:47*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.9 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 13:47*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 13:47	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-45

1J19003-45 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:38	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:38	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:38	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:38	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 11:38	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 11:38*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 11:38*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12300**	52.1	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 15:25	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 14:10	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 14:10	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 14:10	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.5 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 14:10*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 14:10*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 14:10	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-46

1J19003-46 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:00	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:00	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:00	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:00	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:00	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 12:00*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.9 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 12:00*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12700**	50.5	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 15:40	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 15:18	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 15:18	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 15:18	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.0 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 15:18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 15:18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 15:18	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-47

1J19003-47 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:21	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:21	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:21	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:21	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 12:21*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 12:21*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**14100**	50.5	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 15:55	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 15:41	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 15:41	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 15:41	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.0 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 15:41*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 15:41*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 15:41	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-48

1J19003-48 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:42	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:42	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:42	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:42	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2209	10/22/21 14:33	10/23/21 12:42	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 12:42*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2209*	*10/22/21 14:33*	*10/23/21 12:42*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**10800**	51.0	mg/kg dry	50	P1J2101	10/21/21 09:01	10/21/21 16:11	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:03	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:03	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:03	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.4 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 16:03*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.9 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 16:03*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 16:03	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-49

1J19003-49 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:31	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:31	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:31	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:31	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:31	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 15:31*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 15:31*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9830**	26.6	mg/kg dry	25	P1J2101	10/21/21 09:01	10/21/21 16:26	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:26	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:26	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:26	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.0 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 16:26*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 16:26*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 16:26	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-50

1J19003-50 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:52	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:52	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:52	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:52	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 15:52	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 15:52*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 15:52*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8260**	26.6	mg/kg dry	25	P1J2101	10/21/21 09:01	10/21/21 16:41	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:49	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:49	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 16:49	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.2 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 16:49*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 16:49*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 16:49	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-51

1J19003-51 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:13	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:13	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:13	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:13	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*104 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 16:13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*111 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 16:13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2100**	5.10	mg/kg dry	5	P1J2101	10/21/21 09:01	10/21/21 16:57	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:11	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:11	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:11	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.7 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 17:11*	*TPH 8015M*	
Surrogate: o-Terphenyl		*107 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 17:11*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 17:11	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-52

1J19003-52 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:35	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:35	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:35	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:35	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:35	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 16:35*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 16:35*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8500**	26.0	mg/kg dry	25	P1J2103	10/21/21 09:23	10/21/21 18:29	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:34	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:34	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:34	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.9 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 17:34*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.2 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 17:34*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 17:34	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-53

1J19003-53 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:56	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:56	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:56	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:56	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 16:56	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 16:56*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 16:56*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6170**	25.3	mg/kg dry	25	P1J2103	10/21/21 09:23	10/21/21 19:15	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:57	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:57	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 17:57	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.6 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 17:57*	*TPH 8015M*	
Surrogate: o-Terphenyl		*99.3 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 17:57*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 17:57	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-54

1J19003-54 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:17	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:17	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:17	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:17	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:17	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 17:17*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 17:17*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7520**	25.5	mg/kg dry	25	P1J2103	10/21/21 09:23	10/21/21 19:30	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 18:19	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 18:19	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 18:19	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.3 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 18:19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 18:19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 18:19	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-55

1J19003-55 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:38	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:38	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:38	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:38	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:38	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 17:38*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 17:38*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12500**	50.5	mg/kg dry	50	P1J2103	10/21/21 09:23	10/21/21 19:45	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 18:42	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 18:42	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2005	10/20/21 15:00	10/23/21 18:42	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.1 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 18:42*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2005*	*10/20/21 15:00*	*10/23/21 18:42*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/20/21 15:00	10/23/21 18:42	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-56

1J19003-56 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:59	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:59	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:59	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:59	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 17:59	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 17:59*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 17:59*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3740**	10.6	mg/kg dry	10	P1J2103	10/21/21 09:23	10/21/21 20:00	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 16:43	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 16:43	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 16:43	TPH 8015M	
Surrogate: 1-Chlorooctane		*73.7 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 16:43*	*TPH 8015M*	
Surrogate: o-Terphenyl		*77.9 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 16:43*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 16:43	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-57

1J19003-57 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:21	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:21	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:21	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:21	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:21	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 18:21*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 18:21*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**15600**	53.8	mg/kg dry	50	P1J2103	10/21/21 09:23	10/21/21 20:16	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:05	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:05	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:05	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.9 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 17:05*	*TPH 8015M*	
Surrogate: o-Terphenyl		*83.8 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 17:05*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 17:05	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-58

1J19003-58 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:42	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:42	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:42	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:42	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 18:42	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 18:42*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 18:42*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5630**	10.8	mg/kg dry	10	P1J2103	10/21/21 09:23	10/21/21 20:31	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:28	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:28	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:28	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.2 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 17:28*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.0 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 17:28*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 17:28	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-59

1J19003-59 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 19:45	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 19:45	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 19:45	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 19:45	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 19:45	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 19:45*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 19:45*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11100**	27.8	mg/kg dry	25	P1J2103	10/21/21 09:23	10/21/21 20:46	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:50	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:50	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 17:50	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.4 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 17:50*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.5 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 17:50*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 17:50	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-60

1J19003-60 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:06	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:06	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:06	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:06	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:06	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 20:06*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 20:06*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**11800**	56.8	mg/kg dry	50	P1J2103	10/21/21 09:23	10/21/21 21:02	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:13	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:13	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:13	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.5 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 18:13*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.9 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 18:13*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 18:13	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-61

1J19004-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:27	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:27	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:27	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:27	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:27	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 20:27*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 20:27*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9670**	27.5	mg/kg dry	25	P1J2103	10/21/21 09:23	10/21/21 21:17	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:35	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:35	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:35	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 18:35*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 18:35*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 18:35	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-62

1J19004-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:49	EPA 8021B	
Toluene	ND	0.00115	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:49	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:49	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:49	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 20:49	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 20:49*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.5 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 20:49*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12900**	57.5	mg/kg dry	50	P1J2103	10/21/21 09:23	10/21/21 22:03	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:58	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:58	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 18:58	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.1 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 18:58*	*TPH 8015M*	
Surrogate: o-Terphenyl		*86.4 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 18:58*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 18:58	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-63

1J19004-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:10	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:10	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:10	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:10	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:10	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 21:10*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 21:10*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7640**	27.5	mg/kg dry	25	P1J2103	10/21/21 09:23	10/21/21 22:48	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 19:20	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 19:20	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 19:20	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.0 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 19:20*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.9 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 19:20*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 19:20	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-64

1J19004-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:31	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:31	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:31	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:31	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:31	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 21:31*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 21:31*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7010**	28.1	mg/kg dry	25	P1J2103	10/21/21 09:23	10/21/21 23:04	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 19:43	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 19:43	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 19:43	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.9 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 19:43*	*TPH 8015M*	
Surrogate: o-Terphenyl		*87.4 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 19:43*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 19:43	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-65

1J19004-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:52	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:52	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:52	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:52	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 21:52	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 21:52*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.0 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 21:52*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1730**	1.06	mg/kg dry	1	P1J2103	10/21/21 09:23	10/21/21 23:19	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 20:05	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 20:05	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 20:05	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.8 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 20:05*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 20:05*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 20:05	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-66

1J19004-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:14	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:14	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:14	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:14	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:14	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.6 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 22:14*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 22:14*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2790**	11.0	mg/kg dry	10	P1J2103	10/21/21 09:23	10/21/21 23:34	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 21:14	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 21:14	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 21:14	TPH 8015M	
Surrogate: 1-Chlorooctane		*77.5 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 21:14*	*TPH 8015M*	
Surrogate: o-Terphenyl		*82.2 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 21:14*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 21:14	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-67

1J19004-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:35	EPA 8021B	
Toluene	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:35	EPA 8021B	
Ethylbenzene	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:35	EPA 8021B	
Xylene (p/m)	ND	0.00227	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:35	EPA 8021B	
Xylene (o)	ND	0.00114	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:35	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.6 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 22:35*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 22:35*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5220**	11.4	mg/kg dry	10	P1J2103	10/21/21 09:23	10/21/21 23:49	EPA 300.0	
% Moisture	**12.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.4	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 21:37	TPH 8015M	
>C12-C28	ND	28.4	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 21:37	TPH 8015M	
>C28-C35	ND	28.4	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 21:37	TPH 8015M	
Surrogate: 1-Chlorooctane		*79.7 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 21:37*	*TPH 8015M*	
Surrogate: o-Terphenyl		*84.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 21:37*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.4	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 21:37	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-68

1J19004-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:56	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:56	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:56	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:56	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2210	10/22/21 14:35	10/23/21 22:56	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 22:56*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2210*	*10/22/21 14:35*	*10/23/21 22:56*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4150**	11.0	mg/kg dry	10	P1J2103	10/21/21 09:23	10/22/21 00:05	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:00	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:00	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:00	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.4 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 22:00*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.7 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 22:00*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 22:00	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-69

1J19004-09 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 13:50	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 13:50	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 13:50	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 13:50	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 13:50	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 13:50*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 13:50*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5360**	11.1	mg/kg dry	10	P1J2103	10/21/21 09:23	10/22/21 00:20	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:22	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:22	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:22	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.9 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 22:22*	*TPH 8015M*	
Surrogate: o-Terphenyl		*87.4 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 22:22*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 22:22	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-70

1J19004-10 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:11	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:11	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:11	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:11	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:11	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 14:11*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.6 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 14:11*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6740**	27.8	mg/kg dry	25	P1J2103	10/21/21 09:23	10/22/21 00:35	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:45	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:45	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 22:45	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.5 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 22:45*	*TPH 8015M*	
Surrogate: o-Terphenyl		*87.7 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 22:45*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 22:45	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-71

1J19004-11 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:32	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:32	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:32	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:32	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:32	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 14:32*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 14:32*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8830**	56.2	mg/kg dry	50	P1J2103	10/21/21 09:23	10/22/21 00:51	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:08	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:08	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:08	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.7 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 23:08*	*TPH 8015M*	
Surrogate: o-Terphenyl		*86.1 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 23:08*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 23:08	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-72

1J19004-12 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:54	EPA 8021B	
Toluene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:54	EPA 8021B	
Ethylbenzene	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:54	EPA 8021B	
Xylene (p/m)	ND	0.00222	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:54	EPA 8021B	
Xylene (o)	ND	0.00111	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 14:54	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 14:54*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 14:54*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8700**	27.8	mg/kg dry	25	P1J2108	10/21/21 12:15	10/21/21 15:06	EPA 300.0	
% Moisture	**10.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:31	TPH 8015M	
>C12-C28	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:31	TPH 8015M	
>C28-C35	ND	27.8	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:31	TPH 8015M	
Surrogate: 1-Chlorooctane		*82.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 23:31*	*TPH 8015M*	
Surrogate: o-Terphenyl		*88.0 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 23:31*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.8	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 23:31	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-73

1J19004-13 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00115	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:15	EPA 8021B	
Toluene	ND	0.00115	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:15	EPA 8021B	
Ethylbenzene	ND	0.00115	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:15	EPA 8021B	
Xylene (p/m)	ND	0.00230	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:15	EPA 8021B	
Xylene (o)	ND	0.00115	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:15	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 15:15*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 15:15*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12700**	57.5	mg/kg dry	50	P1J2108	10/21/21 12:15	10/21/21 16:03	EPA 300.0	
% Moisture	**13.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.7	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:54	TPH 8015M	
>C12-C28	ND	28.7	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:54	TPH 8015M	
>C28-C35	ND	28.7	mg/kg dry	1	P1J2105	10/21/21 07:30	10/24/21 23:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.4 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 23:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*86.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/24/21 23:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.7	mg/kg dry	1	[CALC]	10/21/21 07:30	10/24/21 23:54	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-74

1J19004-14 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:36	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:36	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:36	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:36	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:36	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 15:36*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 15:36*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6210**	27.5	mg/kg dry	25	P1J2108	10/21/21 12:15	10/21/21 16:22	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/25/21 00:18	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/25/21 00:18	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2105	10/21/21 07:30	10/25/21 00:18	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/25/21 00:18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*84.6 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/25/21 00:18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/21/21 07:30	10/25/21 00:18	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-75

1J19004-15 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:58	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:58	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:58	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:58	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 15:58	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 15:58*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 15:58*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4950**	10.8	mg/kg dry	10	P1J2108	10/21/21 12:15	10/21/21 16:41	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/25/21 00:41	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/25/21 00:41	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1J2105	10/21/21 07:30	10/25/21 00:41	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.3 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/25/21 00:41*	*TPH 8015M*	
Surrogate: o-Terphenyl		*84.2 %*	*70-130*		*P1J2105*	*10/21/21 07:30*	*10/25/21 00:41*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	10/21/21 07:30	10/25/21 00:41	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-77

1J19004-16 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:19	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:19	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:19	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:19	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:19	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 16:19*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.4 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 16:19*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1610**	5.05	mg/kg dry	5	P1J2108	10/21/21 12:15	10/21/21 17:00	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:08	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:08	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:08	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.8 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 04:08*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.5 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 04:08*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 04:08	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-78

1J19004-17 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:41	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:41	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:41	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:41	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 16:41	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 16:41*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 16:41*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**568**	1.00	mg/kg dry	1	P1J2108	10/21/21 12:15	10/21/21 17:19	EPA 300.0	
% Moisture	ND	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:31	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:31	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:31	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.6 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 04:31*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 04:31*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 04:31	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-1

1J19004-18 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 17:02	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 17:02	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 17:02	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 17:02	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 17:02	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 17:02*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.7 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 17:02*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1080**	1.02	mg/kg dry	1	P1J2108	10/21/21 12:15	10/21/21 17:38	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:55	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:55	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 04:55	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.8 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 04:55*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 04:55*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 04:55	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-2

1J19004-19 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:06	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:06	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:06	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:06	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:06	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 18:06*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 18:06*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8540**	25.8	mg/kg dry	25	P1J2108	10/21/21 12:15	10/21/21 17:57	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 05:18	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 05:18	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 05:18	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.6 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 05:18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 05:18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 05:18	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-3

1J19004-20 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:27	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:27	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:27	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:27	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:27	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.9 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 18:27*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 18:27*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**19400**	51.5	mg/kg dry	50	P1J2108	10/21/21 12:15	10/21/21 18:16	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 05:41	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 05:41	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 05:41	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.6 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 05:41*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.4 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 05:41*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 05:41	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-4

1J19004-21 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:48	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:48	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:48	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:48	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 18:48	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 18:48*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 18:48*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**22800**	52.6	mg/kg dry	50	P1J2108	10/21/21 12:15	10/21/21 18:35	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:04	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:04	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:04	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.3 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 06:04*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 06:04*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 06:04	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-5

1J19004-22 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:09	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:09	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:09	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:09	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:09	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 19:09*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 19:09*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8780**	26.3	mg/kg dry	25	P1J2108	10/21/21 12:15	10/21/21 19:32	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:27	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:27	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:27	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.9 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 06:27*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 06:27*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 06:27	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-6

1J19004-23 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:30	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:30	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:30	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:30	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:30	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 19:30*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 19:30*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4630**	10.2	mg/kg dry	10	P1J2108	10/21/21 12:15	10/21/21 20:30	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:50	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:50	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 06:50	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.0 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 06:50*	*TPH 8015M*	
Surrogate: o-Terphenyl		*99.7 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 06:50*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 06:50	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-7

1J19004-24 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:52	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:52	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:52	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:52	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 19:52	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 19:52*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 19:52*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6880**	25.5	mg/kg dry	25	P1J2108	10/21/21 12:15	10/21/21 20:49	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 07:13	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 07:13	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 07:13	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.2 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 07:13*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.5 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 07:13*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 07:13	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-8

1J19004-25 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:13	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:13	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:13	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:13	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:13	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 20:13*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 20:13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**22000**	53.2	mg/kg dry	50	P1J2108	10/21/21 12:15	10/21/21 21:08	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 07:36	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 07:36	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 07:36	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.5 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 07:36*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.7 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 07:36*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 07:36	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-9

1J19004-26 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:34	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:34	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:34	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:34	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:34	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 20:34*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 20:34*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9610**	25.5	mg/kg dry	25	P1J2108	10/21/21 12:15	10/21/21 21:27	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 08:45	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 08:45	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 08:45	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.6 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 08:45*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 08:45*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 08:45	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-10

1J19004-27 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:55	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:55	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:55	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:55	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 20:55	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 20:55*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 20:55*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12900**	52.1	mg/kg dry	50	P1J2108	10/21/21 12:15	10/21/21 21:46	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:08	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:08	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:08	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.4 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 09:08*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 09:08*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 09:08	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-11

1J19004-28 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 21:16	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 21:16	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 21:16	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 21:16	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2505	10/25/21 10:34	10/25/21 21:16	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 21:16*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2505*	*10/25/21 10:34*	*10/25/21 21:16*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12200**	52.6	mg/kg dry	50	P1J2108	10/21/21 12:15	10/21/21 22:05	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:31	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:31	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:31	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.5 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 09:31*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 09:31*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 09:31	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-12

1J19004-29 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:05	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:05	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:05	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:05	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:05	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 00:05*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 00:05*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5570**	10.3	mg/kg dry	10	P1J2108	10/21/21 12:15	10/21/21 22:24	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:54	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:54	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 09:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*79.5 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 09:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*84.9 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 09:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 09:54	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-13

1J19004-30 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:26	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:26	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:26	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:26	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:26	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 00:26*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 00:26*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12800**	50.5	mg/kg dry	50	P1J2108	10/21/21 12:15	10/21/21 22:43	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 10:17	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 10:17	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 10:17	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.9 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 10:17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.5 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 10:17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 10:17	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-76

1J19004-31 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:47	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:47	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:47	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:47	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 00:47	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 00:47*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 00:47*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5050**	11.0	mg/kg dry	10	P1J2108	10/21/21 12:15	10/21/21 23:02	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 10:40	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 10:40	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 10:40	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.3 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 10:40*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.3 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 10:40*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 10:40	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-14

1J19004-32 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:08	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:08	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:08	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:08	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:08	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 01:08*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.9 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 01:08*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**43500**	52.1	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 02:22	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:02	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:02	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:02	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.0 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 11:02*	*TPH 8015M*	
Surrogate: o-Terphenyl		*86.1 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 11:02*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 11:02	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-15

1J19004-33 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:29	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:29	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:29	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:29	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:29	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 01:29*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 01:29*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**29600**	52.1	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 03:08	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:25	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:25	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:25	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.0 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 11:25*	*TPH 8015M*	
Surrogate: o-Terphenyl		*86.4 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 11:25*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 11:25	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-16

1J19004-34 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:51	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:51	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:51	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:51	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 01:51	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 01:51*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 01:51*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**14400**	52.1	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 03:24	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:48	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:48	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 11:48	TPH 8015M	
Surrogate: 1-Chlorooctane		*81.8 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 11:48*	*TPH 8015M*	
Surrogate: o-Terphenyl		*87.1 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 11:48*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 11:48	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-17

1J19004-35 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:12	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:12	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:12	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:12	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:12	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 02:12*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 02:12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9280**	51.5	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 03:39	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 12:10	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 12:10	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2107	10/21/21 11:00	10/25/21 12:10	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.4 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 12:10*	*TPH 8015M*	
Surrogate: o-Terphenyl		*85.9 %*	*70-130*		*P1J2107*	*10/21/21 11:00*	*10/25/21 12:10*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 11:00	10/25/21 12:10	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-18

1J19004-36 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:33	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:33	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:33	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:33	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:33	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 02:33*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 02:33*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8580**	25.8	mg/kg dry	25	P1J2112	10/21/21 16:15	10/22/21 03:54	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:03	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:03	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:03	TPH 8015M	
Surrogate: 1-Chlorooctane		*92.2 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 17:03*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.2 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 17:03*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 17:03	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-19

1J19004-37 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:55	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:55	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:55	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:55	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 02:55	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 02:55*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 02:55*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**15800**	52.1	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 04:10	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:25	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:25	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:25	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.1 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 17:25*	*TPH 8015M*	
Surrogate: o-Terphenyl		*93.5 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 17:25*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 17:25	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-20

1J19004-38 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 03:16	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 03:16	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 03:16	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 03:16	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 03:16	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 03:16*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 03:16*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3900**	10.2	mg/kg dry	10	P1J2112	10/21/21 16:15	10/22/21 04:25	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:48	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:48	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 17:48	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.2 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 17:48*	*TPH 8015M*	
Surrogate: o-Terphenyl		*93.8 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 17:48*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 17:48	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-21

1J19004-39 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	**0.00151**	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 12:24	EPA 8021B	
Toluene	**0.0125**	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 12:24	EPA 8021B	
Ethylbenzene	**0.00206**	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 12:24	EPA 8021B	
Xylene (p/m)	**0.00424**	0.00202	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 12:24	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 12:24	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 12:24*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 12:24*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5460**	10.1	mg/kg dry	10	P1J2112	10/21/21 16:15	10/22/21 04:40	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:11	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:11	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:11	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.3 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 18:11*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.0 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 18:11*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 18:11	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-22

1J19004-40 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 04:40	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 04:40	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 04:40	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 04:40	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 04:40	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 04:40*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 04:40*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8550**	52.6	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 04:56	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:34	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:34	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:34	TPH 8015M	
Surrogate: 1-Chlorooctane		*87.2 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 18:34*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.0 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 18:34*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 18:34	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-23

1J19004-41 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:02	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:02	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:02	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:02	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:02	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.7 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 05:02*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 05:02*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9000**	52.6	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 05:11	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:56	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:56	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 18:56	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 18:56*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 18:56*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 18:56	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-24

1J19004-42 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:23	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:23	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:23	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:23	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:23	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 05:23*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.4 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 05:23*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12800**	52.6	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 05:57	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 19:18	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 19:18	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 19:18	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.2 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 19:18*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.0 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 19:18*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 19:18	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-25

1J19004-43 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:44	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:44	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:44	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:44	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 05:44	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 05:44*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 05:44*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9190**	51.5	mg/kg dry	50	P1J2112	10/21/21 16:15	10/22/21 06:43	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 19:41	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 19:41	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 19:41	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.8 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 19:41*	*TPH 8015M*	
Surrogate: o-Terphenyl		*102 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 19:41*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 19:41	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-26

1J19004-44 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:06	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:06	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:06	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:06	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:06	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.4 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 06:06*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 06:06*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9.89**	1.00	mg/kg dry	1	P1J2112	10/21/21 16:15	10/22/21 06:58	EPA 300.0	
% Moisture	ND	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 20:03	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 20:03	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 20:03	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.6 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 20:03*	*TPH 8015M*	
Surrogate: o-Terphenyl		*99.5 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 20:03*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 20:03	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-27

1J19004-45 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:27	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:27	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:27	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:27	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:27	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 06:27*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.7 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 06:27*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**78.1**	1.01	mg/kg dry	1	P1J2112	10/21/21 16:15	10/22/21 07:14	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 20:25	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 20:25	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 20:25	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.0 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 20:25*	*TPH 8015M*	
Surrogate: o-Terphenyl		*99.0 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 20:25*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 20:25	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-28

1J19004-46 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:48	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:48	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:48	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:48	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 06:48	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 06:48*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 06:48*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**650**	1.03	mg/kg dry	1	P1J2112	10/21/21 16:15	10/22/21 07:29	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 21:32	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 21:32	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 21:32	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.2 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 21:32*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.4 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 21:32*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 21:32	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-29

1J19004-47 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:10	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:10	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:10	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:10	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:10	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.5 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 07:10*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 07:10*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2430**	5.15	mg/kg dry	5	P1J2112	10/21/21 16:15	10/22/21 07:44	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 21:54	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 21:54	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 21:54	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.4 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 21:54*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.6 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 21:54*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 21:54	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-30

1J19004-48 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:31	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:31	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:31	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:31	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2506	10/25/21 10:39	10/26/21 07:31	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 07:31*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.6 %*	*80-120*		*P1J2506*	*10/25/21 10:39*	*10/26/21 07:31*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**913**	1.04	mg/kg dry	1	P1J2112	10/21/21 16:15	10/22/21 07:59	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 22:16	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 22:16	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 22:16	TPH 8015M	
Surrogate: 1-Chlorooctane		*95.5 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 22:16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 22:16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 22:16	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-31

1J19004-49 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:31	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:31	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:31	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:31	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:31	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 14:31*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.6 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 14:31*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**678**	1.03	mg/kg dry	1	P1J2112	10/21/21 16:15	10/22/21 08:15	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 22:39	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 22:39	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 22:39	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.9 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 22:39*	*TPH 8015M*	
Surrogate: o-Terphenyl		*100 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 22:39*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 22:39	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-32

1J19004-50 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:52	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:52	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:52	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:52	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 14:52	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 14:52*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.9 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 14:52*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**990**	1.03	mg/kg dry	1	P1J2112	10/21/21 16:15	10/22/21 08:30	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:01	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:01	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:01	TPH 8015M	
Surrogate: 1-Chlorooctane		*93.8 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 23:01*	*TPH 8015M*	
Surrogate: o-Terphenyl		*98.6 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 23:01*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 23:01	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-33

1J19004-51 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:13	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:13	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:13	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:13	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:13	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 15:13*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 15:13*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4960**	11.0	mg/kg dry	10	P1J2112	10/21/21 16:15	10/22/21 08:45	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:23	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:23	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:23	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.3 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 23:23*	*TPH 8015M*	
Surrogate: o-Terphenyl		*103 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 23:23*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 23:23	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-34

1J19004-52 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:35	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:35	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:35	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:35	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:35	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 15:35*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 15:35*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**3110**	10.2	mg/kg dry	10	P1J2202	10/22/21 09:24	10/22/21 10:51	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:46	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:46	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/26/21 23:46	TPH 8015M	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 23:46*	*TPH 8015M*	
Surrogate: o-Terphenyl		*127 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/26/21 23:46*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 15:00	10/26/21 23:46	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-35

1J19004-53 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:56	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:56	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:56	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:56	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 15:56	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 15:56*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.5 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 15:56*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2860**	10.2	mg/kg dry	10	P1J2202	10/22/21 09:24	10/22/21 11:37	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:08	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:08	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:08	TPH 8015M	
Surrogate: 1-Chlorooctane		*118 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/27/21 00:08*	*TPH 8015M*	
Surrogate: o-Terphenyl		*126 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/27/21 00:08*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 15:00	10/27/21 00:08	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-36

1J19004-54 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:18	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:18	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:18	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:18	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.0 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 16:18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 16:18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**2340**	5.05	mg/kg dry	5	P1J2202	10/22/21 09:24	10/22/21 11:52	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:31	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:31	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:31	TPH 8015M	
Surrogate: 1-Chlorooctane		*123 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/27/21 00:31*	*TPH 8015M*	
Surrogate: o-Terphenyl		*130 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/27/21 00:31*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/21/21 15:00	10/27/21 00:31	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-37

1J19004-55 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:39	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:39	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:39	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:39	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 16:39	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 16:39*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.9 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 16:39*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1780**	5.05	mg/kg dry	5	P1J2202	10/22/21 09:24	10/22/21 12:08	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:53	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:53	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1J2111	10/21/21 15:00	10/27/21 00:53	TPH 8015M	
Surrogate: 1-Chlorooctane		*115 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/27/21 00:53*	*TPH 8015M*	
Surrogate: o-Terphenyl		*122 %*	*70-130*		*P1J2111*	*10/21/21 15:00*	*10/27/21 00:53*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	10/21/21 15:00	10/27/21 00:53	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-38

1J19004-56 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:01	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:01	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:01	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:01	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:01	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 17:01*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.6 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 17:01*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7650**	10.3	mg/kg dry	10	P1J2202	10/22/21 09:24	10/22/21 12:23	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 21:40	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 21:40	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 21:40	TPH 8015M	
Surrogate: 1-Chlorooctane		*108 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 21:40*	*TPH 8015M*	
Surrogate: o-Terphenyl		*116 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 21:40*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 16:05	10/26/21 21:40	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-39

1J19004-57 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:22	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:22	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:22	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:22	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:22	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 17:22*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 17:22*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**4900**	10.2	mg/kg dry	10	P1J2202	10/22/21 09:24	10/22/21 12:38	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:03	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:03	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:03	TPH 8015M	
Surrogate: 1-Chlorooctane		*106 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 22:03*	*TPH 8015M*	
Surrogate: o-Terphenyl		*113 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 22:03*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 16:05	10/26/21 22:03	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-40

1J19004-58 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:43	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:43	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:43	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:43	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 17:43	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 17:43*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.4 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 17:43*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**25900**	52.1	mg/kg dry	50	P1J2202	10/22/21 09:24	10/22/21 12:54	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:26	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:26	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:26	TPH 8015M	
Surrogate: 1-Chlorooctane		*104 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 22:26*	*TPH 8015M*	
Surrogate: o-Terphenyl		*111 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 22:26*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 16:05	10/26/21 22:26	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-41

1J19004-59 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 18:47	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 18:47	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 18:47	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 18:47	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 18:47	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 18:47*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 18:47*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8160**	25.8	mg/kg dry	25	P1J2202	10/22/21 09:24	10/22/21 13:09	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:48	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:48	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 22:48	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 22:48*	*TPH 8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 22:48*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	10/21/21 16:05	10/26/21 22:48	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-42

1J19004-60 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:08	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:08	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:08	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:08	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:08	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 19:08*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 19:08*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**9060**	26.3	mg/kg dry	25	P1J2202	10/22/21 09:24	10/22/21 13:24	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:11	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:11	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:11	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.9 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 23:11*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 23:11*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 16:05	10/26/21 23:11	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-43

1J19004-61 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:29	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:29	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:29	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:29	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:29	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 19:29*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*104 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 19:29*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7000**	10.4	mg/kg dry	10	P1J2202	10/22/21 09:24	10/22/21 13:40	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:34	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:34	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:34	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.1 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 23:34*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 23:34*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	10/21/21 16:05	10/26/21 23:34	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-44

1J19004-62 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00112	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:50	EPA 8021B	
Toluene	ND	0.00112	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:50	EPA 8021B	
Ethylbenzene	ND	0.00112	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:50	EPA 8021B	
Xylene (p/m)	ND	0.00225	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:50	EPA 8021B	
Xylene (o)	ND	0.00112	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 19:50	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 19:50*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*103 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 19:50*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**24200**	56.2	mg/kg dry	50	P1J2202	10/22/21 09:24	10/22/21 14:25	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	28.1	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:57	TPH 8015M	
>C12-C28	ND	28.1	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:57	TPH 8015M	
>C28-C35	ND	28.1	mg/kg dry	1	P1J2205	10/21/21 16:05	10/26/21 23:57	TPH 8015M	
Surrogate: 1-Chlorooctane		*97.8 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 23:57*	*TPH 8015M*	
Surrogate: o-Terphenyl		*105 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/26/21 23:57*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	28.1	mg/kg dry	1	[CALC]	10/21/21 16:05	10/26/21 23:57	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-45

1J19004-63 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00106	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:11	EPA 8021B	
Toluene	ND	0.00106	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:11	EPA 8021B	
Ethylbenzene	ND	0.00106	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:11	EPA 8021B	
Xylene (p/m)	ND	0.00213	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:11	EPA 8021B	
Xylene (o)	ND	0.00106	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:11	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*103 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 20:11*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 20:11*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**15900**	53.2	mg/kg dry	50	P1J2202	10/22/21 09:24	10/22/21 15:11	EPA 300.0	
% Moisture	**6.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.6	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 00:19	TPH 8015M	
>C12-C28	ND	26.6	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 00:19	TPH 8015M	
>C28-C35	ND	26.6	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 00:19	TPH 8015M	
Surrogate: 1-Chlorooctane		*87.8 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 00:19*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.2 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 00:19*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.6	mg/kg dry	1	[CALC]	10/21/21 16:05	10/27/21 00:19	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-46

1J19004-64 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:32	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:32	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:32	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:32	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:32	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*104 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 20:32*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 20:32*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7850**	25.5	mg/kg dry	25	P1J2202	10/22/21 09:24	10/22/21 15:27	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 00:42	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 00:42	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 00:42	TPH 8015M	
Surrogate: 1-Chlorooctane		*101 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 00:42*	*TPH 8015M*	
Surrogate: o-Terphenyl		*109 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 00:42*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 16:05	10/27/21 00:42	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-47

1J19004-65 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:53	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:53	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:53	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:53	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 20:53	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 20:53*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*103 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 20:53*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6370**	26.3	mg/kg dry	25	P1J2202	10/22/21 09:24	10/22/21 15:42	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 01:05	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 01:05	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 01:05	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.0 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 01:05*	*TPH 8015M*	
Surrogate: o-Terphenyl		*106 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 01:05*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	10/21/21 16:05	10/27/21 01:05	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-48

1J19004-66 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 21:14	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 21:14	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 21:14	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 21:14	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1J2604	10/26/21 10:55	10/26/21 21:14	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*99.7 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 21:14*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*103 %*	*80-120*		*P1J2604*	*10/26/21 10:55*	*10/26/21 21:14*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1400**	5.10	mg/kg dry	5	P1J2202	10/22/21 09:24	10/25/21 08:35	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1J2106	10/21/21 10:37	10/21/21 10:50	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 02:13	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 02:13	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1J2205	10/21/21 16:05	10/27/21 02:13	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.4 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 02:13*	*TPH 8015M*	
Surrogate: o-Terphenyl		*107 %*	*70-130*		*P1J2205*	*10/21/21 16:05*	*10/27/21 02:13*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	10/21/21 16:05	10/27/21 02:13	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J1909 - * DEFAULT PREP *** **										
Blank (P1J1909-BLK1)				Prepared: 10/19/21 Analyzed: 10/20/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.145*		*"*	*0.120*		*121*	*80-120*			*S-GC*
Surrogate: 1,4-Difluorobenzene	*0.130*		*"*	*0.120*		*108*	*80-120*			
LCS (P1J1909-BS1)				Prepared & Analyzed: 10/19/21						
Benzene	0.0998	0.00100	mg/kg wet	0.100		99.8	70-130			
Toluene	0.0981	0.00100	"	0.100		98.1	70-130			
Ethylbenzene	0.0929	0.00100	"	0.100		92.9	70-130			
Xylene (p/m)	0.189	0.00200	"	0.200		94.3	70-130			
Xylene (o)	0.0976	0.00100	"	0.100		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	*0.115*		*"*	*0.120*		*96.2*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.117*		*"*	*0.120*		*97.3*	*80-120*			
Calibration Blank (P1J1909-CCB1)				Prepared & Analyzed: 10/19/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.124*		*"*	*0.120*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.120*		*104*	*80-120*			
Calibration Blank (P1J1909-CCB2)				Prepared: 10/19/21 Analyzed: 10/20/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.120*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.124*		*"*	*0.120*		*103*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J1909 - * DEFAULT PREP *** **										
Calibration Check (P1J1909-CCV1)				Prepared & Analyzed: 10/19/21						
Benzene	0.0973	0.00100	mg/kg wet	0.100		97.3	80-120			
Toluene	0.0940	0.00100	"	0.100		94.0	80-120			
Ethylbenzene	0.0948	0.00100	"	0.100		94.8	80-120			
Xylene (p/m)	0.190	0.00200	"	0.200		95.1	80-120			
Xylene (o)	0.0975	0.00100	"	0.100		97.5	80-120			
Surrogate: 4-Bromofluorobenzene	*0.117*		"	*0.120*		*97.2*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.5*	*75-125*			
Calibration Check (P1J1909-CCV2)				Prepared: 10/19/21 Analyzed: 10/20/21						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	80-120			
Toluene	0.103	0.00100	"	0.100		103	80-120			
Ethylbenzene	0.102	0.00100	"	0.100		102	80-120			
Xylene (p/m)	0.201	0.00200	"	0.200		101	80-120			
Xylene (o)	0.107	0.00100	"	0.100		107	80-120			
Surrogate: 4-Bromofluorobenzene	*0.118*		"	*0.120*		*97.9*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.117*		"	*0.120*		*97.9*	*75-125*			
Calibration Check (P1J1909-CCV3)				Prepared: 10/19/21 Analyzed: 10/20/21						
Benzene	0.109	0.00100	mg/kg wet	0.100		109	80-120			
Toluene	0.105	0.00100	"	0.100		105	80-120			
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120			
Xylene (p/m)	0.199	0.00200	"	0.200		99.6	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.5*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.118*		"	*0.120*		*98.7*	*75-125*			
Matrix Spike (P1J1909-MS1)		**Source: 1J19003-01**		Prepared: 10/19/21 Analyzed: 10/20/21						
Benzene	0.0831	0.00111	mg/kg dry	0.111	ND	74.8	80-120			QM-07
Toluene	0.0785	0.00111	"	0.111	ND	70.7	80-120			QM-07
Ethylbenzene	0.0734	0.00111	"	0.111	ND	66.0	80-120			QM-07
Xylene (p/m)	0.153	0.00222	"	0.222	ND	69.0	80-120			QM-07
Xylene (o)	0.0789	0.00111	"	0.111	ND	71.0	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	*0.136*		"	*0.133*		*102*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.133*		"	*0.133*		*99.9*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J1909 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1J1909-MSD1)	**Source: 1J19003-01**			Prepared: 10/19/21 Analyzed: 10/20/21						
Benzene	0.0906	0.00111	mg/kg dry	0.111	ND	81.5	80-120	8.60	20	
Toluene	0.0870	0.00111	"	0.111	ND	78.3	80-120	10.3	20	QM-07
Ethylbenzene	0.0810	0.00111	"	0.111	ND	72.9	80-120	9.92	20	QM-07
Xylene (p/m)	0.166	0.00222	"	0.222	ND	74.8	80-120	8.09	20	QM-07
Xylene (o)	0.0869	0.00111	"	0.111	ND	78.2	80-120	9.66	20	QM-07
Surrogate: 1,4-Difluorobenzene	*0.133*		*"*	*0.133*		*99.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.135*		*"*	*0.133*		*102*	*80-120*			
Batch P1J2208 - * DEFAULT PREP *** **										
Blank (P1J2208-BLK1)				Prepared & Analyzed: 10/22/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.122*		*"*	*0.120*		*102*	*80-120*			
LCS (P1J2208-BS1)				Prepared & Analyzed: 10/22/21						
Benzene	0.100	0.00100	mg/kg wet	0.0994		101	70-130			
Toluene	0.0986	0.00100	"	0.0994		99.2	70-130			
Ethylbenzene	0.109	0.00100	"	0.0994		110	70-130			
Xylene (p/m)	0.222	0.00200	"	0.199		112	70-130			
Xylene (o)	0.0980	0.00100	"	0.0994		98.6	70-130			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.119*		*99.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.125*		*"*	*0.119*		*105*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2208 - * DEFAULT PREP *** **										
LCS Dup (P1J2208-BSD1)				Prepared & Analyzed: 10/22/21						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	70-130	3.78	20	
Toluene	0.105	0.00100	"	0.100		104	70-130	5.18	20	
Ethylbenzene	0.116	0.00100	"	0.100		115	70-130	4.78	20	
Xylene (p/m)	0.235	0.00200	"	0.201		117	70-130	4.74	20	
Xylene (o)	0.103	0.00100	"	0.100		102	70-130	3.63	20	
Surrogate: 1,4-Difluorobenzene	*0.121*		"	*0.120*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.126*		"	*0.120*		*105*	*80-120*			
Calibration Blank (P1J2208-CCB1)				Prepared & Analyzed: 10/22/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*103*	*80-120*			
Calibration Blank (P1J2208-CCB2)				Prepared & Analyzed: 10/22/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*103*	*80-120*			
Calibration Check (P1J2208-CCV1)				Prepared & Analyzed: 10/22/21						
Benzene	0.108	0.00100	mg/kg wet	0.100		108	80-120			
Toluene	0.108	0.00100	"	0.100		108	80-120			
Ethylbenzene	0.110	0.00100	"	0.100		110	80-120			
Xylene (p/m)	0.238	0.00200	"	0.200		119	80-120			
Xylene (o)	0.105	0.00100	"	0.100		105	80-120			
Surrogate: 4-Bromofluorobenzene	*0.126*		"	*0.120*		*105*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.122*		"	*0.120*		*102*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2208 - * DEFAULT PREP *** **										
Calibration Check (P1J2208-CCV2)				Prepared & Analyzed: 10/22/21						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.111	0.00100	"	0.100		111	80-120			
Xylene (p/m)	0.240	0.00200	"	0.200		120	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 4-Bromofluorobenzene	*0.127*		"	*0.120*		*105*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.122*		"	*0.120*		*101*	*75-125*			
Calibration Check (P1J2208-CCV3)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.112	0.00100	mg/kg wet	0.100		112	80-120			
Toluene	0.110	0.00100	"	0.100		110	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.234	0.00200	"	0.200		117	80-120			
Xylene (o)	0.108	0.00100	"	0.100		108	80-120			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*100*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*103*	*75-125*			
Matrix Spike (P1J2208-MS1)		**Source: 1J19003-09**		Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0992	0.00115	mg/kg dry	0.115	ND	86.0	80-120			
Toluene	0.0943	0.00115	"	0.115	ND	81.7	80-120			
Ethylbenzene	0.0832	0.00115	"	0.115	ND	72.1	80-120			QM-07
Xylene (p/m)	0.205	0.00230	"	0.231	ND	88.7	80-120			
Xylene (o)	0.0907	0.00115	"	0.115	ND	78.6	80-120			
Surrogate: 1,4-Difluorobenzene	*0.141*		"	*0.138*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.151*		"	*0.138*		*109*	*80-120*			
Matrix Spike Dup (P1J2208-MSD1)		**Source: 1J19003-09**		Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.101	0.00115	mg/kg dry	0.115	ND	87.9	80-120	2.17	20	
Toluene	0.0964	0.00115	"	0.115	ND	83.9	80-120	2.61	20	
Ethylbenzene	0.0831	0.00115	"	0.115	ND	72.3	80-120	0.360	20	QM-07
Xylene (p/m)	0.208	0.00230	"	0.230	ND	90.6	80-120	2.18	20	
Xylene (o)	0.0933	0.00115	"	0.115	ND	81.1	80-120	3.19	20	
Surrogate: 4-Bromofluorobenzene	*0.150*		"	*0.138*		*109*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.140*		"	*0.138*		*101*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2209 - * DEFAULT PREP *** **										
Blank (P1J2209-BLK1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.121*		"	*0.120*		*101*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.9*	*80-120*			
LCS (P1J2209-BS1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0968	0.00100	mg/kg wet	0.0996		97.2	70-130			
Toluene	0.0946	0.00100	"	0.0996		95.0	70-130			
Ethylbenzene	0.102	0.00100	"	0.0996		103	70-130			
Xylene (p/m)	0.205	0.00200	"	0.199		103	70-130			
Xylene (o)	0.0916	0.00100	"	0.0996		92.0	70-130			
Surrogate: 4-Bromofluorobenzene	*0.126*		"	*0.120*		*105*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.7*	*80-120*			
LCS Dup (P1J2209-BSD1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.101	0.00100	mg/kg wet	0.101		100	70-130	3.32	20	
Toluene	0.0996	0.00100	"	0.101		99.0	70-130	4.10	20	
Ethylbenzene	0.107	0.00100	"	0.101		107	70-130	3.84	20	
Xylene (p/m)	0.215	0.00200	"	0.201		107	70-130	3.55	20	
Xylene (o)	0.0964	0.00100	"	0.101		95.8	70-130	4.07	20	
Surrogate: 1,4-Difluorobenzene	*0.121*		"	*0.121*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.121*		*106*	*80-120*			
Calibration Blank (P1J2209-CCB1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.120*		"	*0.120*		*100*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.0*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2209 - * DEFAULT PREP *** **										
Calibration Blank (P1J2209-CCB2)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*99.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.125*		"	*0.120*		*104*	*80-120*			
Calibration Check (P1J2209-CCV1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.112	0.00100	mg/kg wet	0.100		112	80-120			
Toluene	0.110	0.00100	"	0.100		110	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.234	0.00200	"	0.200		117	80-120			
Xylene (o)	0.108	0.00100	"	0.100		108	80-120			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*100*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*103*	*75-125*			
Calibration Check (P1J2209-CCV2)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.110	0.00100	"	0.100		110	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.233	0.00200	"	0.200		116	80-120			
Xylene (o)	0.109	0.00100	"	0.100		109	80-120			
Surrogate: 4-Bromofluorobenzene	*0.126*		"	*0.120*		*105*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.121*		"	*0.120*		*101*	*75-125*			
Calibration Check (P1J2209-CCV3)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.115	0.00100	mg/kg wet	0.100		115	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.235	0.00200	"	0.200		118	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 1,4-Difluorobenzene	*0.121*		"	*0.120*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.120*		*107*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2209 - * DEFAULT PREP *** **										
Matrix Spike (P1J2209-MS1)	**Source: 1J19003-29**			Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0820	0.00102	mg/kg dry	0.102	ND	80.2	80-120			
Toluene	0.0768	0.00102	"	0.102	ND	75.1	80-120			QM-07
Ethylbenzene	0.0741	0.00102	"	0.102	ND	72.4	80-120			QM-07
Xylene (p/m)	0.145	0.00204	"	0.204	ND	70.8	80-120			QM-07
Xylene (o)	0.0643	0.00102	"	0.102	ND	62.8	80-120			QM-07
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.123*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.134*		*"*	*0.123*		*109*	*80-120*			
Matrix Spike Dup (P1J2209-MSD1)	**Source: 1J19003-29**			Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0806	0.00102	mg/kg dry	0.103	ND	78.4	80-120	2.33	20	QM-07
Toluene	0.0757	0.00102	"	0.103	ND	73.6	80-120	2.00	20	QM-07
Ethylbenzene	0.0721	0.00102	"	0.103	ND	70.1	80-120	3.28	20	QM-07
Xylene (p/m)	0.141	0.00204	"	0.206	ND	68.5	80-120	3.28	20	QM-07
Xylene (o)	0.0625	0.00102	"	0.103	ND	60.8	80-120	3.30	20	QM-07
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.123*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.134*		*"*	*0.123*		*108*	*80-120*			
Batch P1J2210 - * DEFAULT PREP *** **										
Blank (P1J2210-BLK1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.123*		*"*	*0.120*		*103*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2210 - * DEFAULT PREP *** **										
LCS (P1J2210-BS1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0934	0.00100	mg/kg wet	0.0998		93.6	70-130			
Toluene	0.0898	0.00100	"	0.0998		90.0	70-130			
Ethylbenzene	0.0959	0.00100	"	0.0998		96.1	70-130			
Xylene (p/m)	0.191	0.00200	"	0.200		95.5	70-130			
Xylene (o)	0.0870	0.00100	"	0.0998		87.1	70-130			
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.120*		*107*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*100*	*80-120*			
LCS Dup (P1J2210-BSD1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0841	0.00100	mg/kg wet	0.101		83.6	70-130	11.4	20	
Toluene	0.0811	0.00100	"	0.101		80.7	70-130	10.9	20	
Ethylbenzene	0.0857	0.00100	"	0.101		85.2	70-130	12.1	20	
Xylene (p/m)	0.170	0.00200	"	0.201		84.4	70-130	12.4	20	
Xylene (o)	0.0813	0.00100	"	0.101		80.8	70-130	7.53	20	
Surrogate: 4-Bromofluorobenzene	*0.132*		"	*0.121*		*109*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.124*		"	*0.121*		*102*	*80-120*			
Calibration Blank (P1J2210-CCB1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*104*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.6*	*80-120*			
Calibration Blank (P1J2210-CCB2)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.123*		"	*0.120*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.7*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2210 - * DEFAULT PREP *** **										
Calibration Blank (P1J2210-CCB3)				Prepared: 10/22/21 Analyzed: 10/24/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.123*		*"*	*0.120*		*102*	*80-120*			
Calibration Check (P1J2210-CCV1)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.115	0.00100	mg/kg wet	0.100		115	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.235	0.00200	"	0.200		118	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 4-Bromofluorobenzene	*0.128*		*"*	*0.120*		*107*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.121*		*"*	*0.120*		*101*	*75-125*			
Calibration Check (P1J2210-CCV2)				Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.109	0.00100	"	0.100		109	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.228	0.00200	"	0.200		114	80-120			
Xylene (o)	0.108	0.00100	"	0.100		108	80-120			
Surrogate: 4-Bromofluorobenzene	*0.126*		*"*	*0.120*		*105*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.121*		*"*	*0.120*		*100*	*75-125*			
Calibration Check (P1J2210-CCV3)				Prepared: 10/22/21 Analyzed: 10/24/21						
Benzene	0.111	0.00100	mg/kg wet	0.100		111	80-120			
Toluene	0.108	0.00100	"	0.100		108	80-120			
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120			
Xylene (p/m)	0.223	0.00200	"	0.200		111	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	*0.120*		*"*	*0.120*		*100*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.128*		*"*	*0.120*		*107*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2210 - * DEFAULT PREP *** **										
Matrix Spike (P1J2210-MS1)	**Source: 1J19003-49**			Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0862	0.00106	mg/kg dry	0.106	ND	81.6	80-120			
Toluene	0.0766	0.00106	"	0.106	ND	72.6	80-120			QM-07
Ethylbenzene	0.0718	0.00106	"	0.106	ND	68.0	80-120			QM-07
Xylene (p/m)	0.0869	0.00213	"	0.211	ND	41.2	80-120			QM-07
Xylene (o)	0.0703	0.00106	"	0.106	ND	66.6	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	*0.137*		*"*	*0.127*		*108*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.128*		*"*	*0.127*		*101*	*80-120*			
Matrix Spike Dup (P1J2210-MSD1)	**Source: 1J19003-49**			Prepared: 10/22/21 Analyzed: 10/23/21						
Benzene	0.0954	0.00106	mg/kg dry	0.106	ND	89.6	80-120	9.34	20	
Toluene	0.0888	0.00106	"	0.106	ND	83.5	80-120	14.0	20	
Ethylbenzene	0.0796	0.00106	"	0.106	ND	74.9	80-120	9.56	20	QM-07
Xylene (p/m)	0.163	0.00213	"	0.213	ND	76.6	80-120	60.2	20	QM-07
Xylene (o)	0.0793	0.00106	"	0.106	ND	74.5	80-120	11.3	20	QM-07
Surrogate: 4-Bromofluorobenzene	*0.140*		*"*	*0.128*		*110*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.130*		*"*	*0.128*		*102*	*80-120*			
Batch P1J2505 - * DEFAULT PREP *** **										
Blank (P1J2505-BLK1)				Prepared & Analyzed: 10/25/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.120*		*"*	*0.120*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.125*		*"*	*0.120*		*104*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2505 - * DEFAULT PREP *** **										
LCS (P1J2505-BS1)				Prepared & Analyzed: 10/25/21						
Benzene	0.111	0.00100	mg/kg wet	0.100		111	70-130			
Toluene	0.114	0.00100	"	0.100		114	70-130			
Ethylbenzene	0.119	0.00100	"	0.100		119	70-130			
Xylene (p/m)	0.240	0.00200	"	0.200		120	70-130			
Xylene (o)	0.111	0.00100	"	0.100		111	70-130			
Surrogate: 1,4-Difluorobenzene	*0.121*		*"*	*0.120*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.128*		*"*	*0.120*		*107*	*80-120*			
LCS Dup (P1J2505-BSD1)				Prepared & Analyzed: 10/25/21						
Benzene	0.100	0.00100	mg/kg wet	0.100		100	70-130	10.0	20	
Toluene	0.101	0.00100	"	0.100		101	70-130	12.1	20	
Ethylbenzene	0.111	0.00100	"	0.100		111	70-130	6.91	20	
Xylene (p/m)	0.227	0.00200	"	0.200		113	70-130	5.55	20	
Xylene (o)	0.100	0.00100	"	0.100		100	70-130	10.6	20	
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.127*		*"*	*0.120*		*105*	*80-120*			
Calibration Blank (P1J2505-CCB1)				Prepared & Analyzed: 10/25/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.122*		*"*	*0.120*		*101*	*80-120*			
Calibration Blank (P1J2505-CCB2)				Prepared & Analyzed: 10/25/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.131*		*"*	*0.120*		*109*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2505 - * DEFAULT PREP *** **										
Calibration Blank (P1J2505-CCB3)				Prepared & Analyzed: 10/25/21						
Benzene	0.00		mg/kg wet							
Toluene	0.390		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*98.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.123*		*"*	*0.120*		*103*	*80-120*			
Calibration Check (P1J2505-CCV1)				Prepared & Analyzed: 10/25/21						
Benzene	0.114	0.00100	mg/kg wet	0.100		114	80-120			
Toluene	0.115	0.00100	"	0.100		115	80-120			
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120			
Xylene (p/m)	0.240	0.00200	"	0.200		120	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 4-Bromofluorobenzene	*0.118*		*"*	*0.120*		*98.0*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.112*		*"*	*0.120*		*93.6*	*75-125*			
Calibration Check (P1J2505-CCV2)				Prepared & Analyzed: 10/25/21						
Benzene	0.116	0.00100	mg/kg wet	0.100		116	80-120			
Toluene	0.115	0.00100	"	0.100		115	80-120			
Ethylbenzene	0.113	0.00100	"	0.100		113	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		119	80-120			
Xylene (o)	0.114	0.00100	"	0.100		114	80-120			
Surrogate: 1,4-Difluorobenzene	*0.121*		*"*	*0.120*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.131*		*"*	*0.120*		*109*	*75-125*			
Calibration Check (P1J2505-CCV3)				Prepared & Analyzed: 10/25/21						
Benzene	0.114	0.00100	mg/kg wet	0.100		114	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		119	80-120			
Xylene (o)	0.110	0.00100	"	0.100		110	80-120			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.3*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.128*		*"*	*0.120*		*107*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2505 - * DEFAULT PREP *** **										
Matrix Spike (P1J2505-MS1)	**Source: 1J19004-09**			Prepared & Analyzed: 10/25/21						
Benzene	0.0823	0.00111	mg/kg dry	0.111	ND	74.1	80-120			QM-07
Toluene	0.0808	0.00111	"	0.111	ND	72.7	80-120			QM-07
Ethylbenzene	0.0863	0.00111	"	0.111	ND	77.7	80-120			QM-07
Xylene (p/m)	0.174	0.00222	"	0.222	ND	78.5	80-120			QM-07
Xylene (o)	0.0761	0.00111	"	0.111	ND	68.5	80-120			QM-07
Surrogate: 1,4-Difluorobenzene	*0.134*		"	*0.133*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.145*		"	*0.133*		*109*	*80-120*			
Matrix Spike Dup (P1J2505-MSD1)	**Source: 1J19004-09**			Prepared & Analyzed: 10/25/21						
Benzene	0.0899	0.00111	mg/kg dry	0.111	ND	80.9	80-120	8.79	20	
Toluene	0.0889	0.00111	"	0.111	ND	80.0	80-120	9.55	20	
Ethylbenzene	0.0950	0.00111	"	0.111	ND	85.5	80-120	9.50	20	
Xylene (p/m)	0.192	0.00222	"	0.222	ND	86.3	80-120	9.46	20	
Xylene (o)	0.0835	0.00111	"	0.111	ND	75.1	80-120	9.26	20	QM-07
Surrogate: 1,4-Difluorobenzene	*0.134*		"	*0.133*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.146*		"	*0.133*		*110*	*80-120*			
Batch P1J2506 - * DEFAULT PREP *** **										
Blank (P1J2506-BLK1)				Prepared & Analyzed: 10/25/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.125*		"	*0.120*		*104*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.2*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2506 - * DEFAULT PREP *** **										
LCS (P1J2506-BS1)				Prepared & Analyzed: 10/25/21						
Benzene	0.0938	0.00100	mg/kg wet	0.100		93.8	70-130			
Toluene	0.0922	0.00100	"	0.100		92.2	70-130			
Ethylbenzene	0.100	0.00100	"	0.100		100	70-130			
Xylene (p/m)	0.201	0.00200	"	0.200		101	70-130			
Xylene (o)	0.0906	0.00100	"	0.100		90.6	70-130			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.129*		*"*	*0.120*		*108*	*80-120*			
LCS Dup (P1J2506-BSD1)				Prepared & Analyzed: 10/25/21						
Benzene	0.0837	0.00100	mg/kg wet	0.100		83.7	70-130	11.4	20	
Toluene	0.0813	0.00100	"	0.100		81.3	70-130	12.6	20	
Ethylbenzene	0.0880	0.00100	"	0.100		88.0	70-130	13.1	20	
Xylene (p/m)	0.177	0.00200	"	0.200		88.6	70-130	12.8	20	
Xylene (o)	0.0810	0.00100	"	0.100		81.0	70-130	11.2	20	
Surrogate: 4-Bromofluorobenzene	*0.131*		*"*	*0.120*		*109*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.120*		*"*	*0.120*		*100*	*80-120*			
Calibration Blank (P1J2506-CCB1)				Prepared & Analyzed: 10/25/21						
Benzene	0.00		mg/kg wet							
Toluene	0.390		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.123*		*"*	*0.120*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*98.9*	*80-120*			
Calibration Blank (P1J2506-CCB2)				Prepared: 10/25/21 Analyzed: 10/26/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.3*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.125*		*"*	*0.120*		*104*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2506 - * DEFAULT PREP *** **										
Calibration Check (P1J2506-CCV1)				Prepared & Analyzed: 10/25/21						
Benzene	0.114	0.00100	mg/kg wet	0.100		114	80-120			
Toluene	0.112	0.00100	"	0.100		112	80-120			
Ethylbenzene	0.109	0.00100	"	0.100		109	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		119	80-120			
Xylene (o)	0.110	0.00100	"	0.100		110	80-120			
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.120*		*107*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.3*	*75-125*			
Calibration Check (P1J2506-CCV2)				Prepared: 10/25/21 Analyzed: 10/26/21						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.110	0.00100	"	0.100		110	80-120			
Ethylbenzene	0.107	0.00100	"	0.100		107	80-120			
Xylene (p/m)	0.232	0.00200	"	0.200		116	80-120			
Xylene (o)	0.109	0.00100	"	0.100		109	80-120			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*100*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.131*		"	*0.120*		*109*	*75-125*			
Calibration Check (P1J2506-CCV3)				Prepared: 10/25/21 Analyzed: 10/26/21						
Benzene	0.112	0.00100	mg/kg wet	0.100		112	80-120			
Toluene	0.108	0.00100	"	0.100		108	80-120			
Ethylbenzene	0.103	0.00100	"	0.100		103	80-120			
Xylene (p/m)	0.224	0.00200	"	0.200		112	80-120			
Xylene (o)	0.105	0.00100	"	0.100		105	80-120			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*99.9*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.120*		*107*	*75-125*			
Matrix Spike (P1J2506-MS1)		**Source: 1J19004-29**		Prepared: 10/25/21 Analyzed: 10/26/21						
Benzene	0.0894	0.00103	mg/kg dry	0.103	ND	86.7	80-120			
Toluene	0.0892	0.00103	"	0.103	ND	86.5	80-120			
Ethylbenzene	0.0903	0.00103	"	0.103	ND	87.5	80-120			
Xylene (p/m)	0.179	0.00206	"	0.206	ND	86.6	80-120			
Xylene (o)	0.0797	0.00103	"	0.103	ND	77.3	80-120			QM-07
Surrogate: 1,4-Difluorobenzene	*0.126*		"	*0.124*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.139*		"	*0.124*		*112*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2506 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1J2506-MSD1)	**Source: 1J19004-29**			Prepared: 10/25/21 Analyzed: 10/26/21						
Benzene	0.0887	0.00103	mg/kg dry	0.103	ND	86.0	80-120	0.753	20	
Toluene	0.0901	0.00103	"	0.103	ND	87.4	80-120	0.955	20	
Ethylbenzene	0.0890	0.00103	"	0.103	ND	86.3	80-120	1.44	20	
Xylene (p/m)	0.176	0.00206	"	0.206	ND	85.3	80-120	1.58	20	
Xylene (o)	0.0784	0.00103	"	0.103	ND	76.0	80-120	1.71	20	QM-07
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.124*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.137*		*"*	*0.124*		*111*	*80-120*			
Batch P1J2604 - * DEFAULT PREP *** **										
Blank (P1J2604-BLK1)				Prepared & Analyzed: 10/26/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.0993*		*"*	*0.102*		*97.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.109*		*"*	*0.102*		*106*	*80-120*			
LCS (P1J2604-BS1)				Prepared & Analyzed: 10/26/21						
Benzene	0.0903	0.00100	mg/kg wet	0.0923		97.9	70-130			
Toluene	0.0919	0.00100	"	0.0923		99.7	70-130			
Ethylbenzene	0.102	0.00100	"	0.0923		110	70-130			
Xylene (p/m)	0.207	0.00200	"	0.185		112	70-130			
Xylene (o)	0.0910	0.00100	"	0.0923		98.7	70-130			
Surrogate: 1,4-Difluorobenzene	*0.109*		*"*	*0.111*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.121*		*"*	*0.111*		*109*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2604 - * DEFAULT PREP *** **										
LCS Dup (P1J2604-BSD1)				Prepared & Analyzed: 10/26/21						
Benzene	0.0845	0.00100	mg/kg wet	0.0874		96.7	70-130	1.23	20	
Toluene	0.0857	0.00100	"	0.0874		98.0	70-130	1.69	20	
Ethylbenzene	0.0957	0.00100	"	0.0874		109	70-130	0.783	20	
Xylene (p/m)	0.195	0.00200	"	0.175		111	70-130	0.470	20	
Xylene (o)	0.0852	0.00100	"	0.0874		97.5	70-130	1.23	20	
Surrogate: 1,4-Difluorobenzene	*0.103*		"	*0.105*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.116*		"	*0.105*		*111*	*80-120*			
Calibration Blank (P1J2604-CCB1)				Prepared & Analyzed: 10/26/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.129*		"	*0.120*		*107*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.2*	*80-120*			
Calibration Blank (P1J2604-CCB2)				Prepared & Analyzed: 10/26/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.130*		"	*0.120*		*108*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*99.9*	*80-120*			
Calibration Check (P1J2604-CCV1)				Prepared & Analyzed: 10/26/21						
Benzene	0.104	0.00100	mg/kg wet	0.100		104	80-120			
Toluene	0.105	0.00100	"	0.100		105	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.233	0.00200	"	0.200		116	80-120			
Xylene (o)	0.102	0.00100	"	0.100		102	80-120			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.129*		"	*0.120*		*108*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2604 - * DEFAULT PREP *** **										
Calibration Check (P1J2604-CCV2)				Prepared & Analyzed: 10/26/21						
Benzene	0.108	0.00100	mg/kg wet	0.100		108	80-120			
Toluene	0.106	0.00100	"	0.100		106	80-120			
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120			
Xylene (p/m)	0.230	0.00200	"	0.200		115	80-120			
Xylene (o)	0.105	0.00100	"	0.100		105	80-120			
Surrogate: 4-Bromofluorobenzene	*0.132*		"	*0.120*		*110*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.121*		"	*0.120*		*101*	*75-125*			
Calibration Check (P1J2604-CCV3)				Prepared & Analyzed: 10/26/21						
Benzene	0.112	0.00100	mg/kg wet	0.100		112	80-120			
Toluene	0.110	0.00100	"	0.100		110	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.233	0.00200	"	0.200		116	80-120			
Xylene (o)	0.108	0.00100	"	0.100		108	80-120			
Surrogate: 1,4-Difluorobenzene	*0.127*		"	*0.120*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*104*	*75-125*			
Matrix Spike (P1J2604-MS1)		**Source: 1J19004-49**		Prepared & Analyzed: 10/26/21						
Benzene	0.0739	0.00103	mg/kg dry	0.103	ND	71.8	80-120			QM-07
Toluene	0.0699	0.00103	"	0.103	ND	67.9	80-120			QM-07
Ethylbenzene	0.0728	0.00103	"	0.103	ND	70.8	80-120			QM-07
Xylene (p/m)	0.146	0.00206	"	0.206	ND	70.8	80-120			QM-07
Xylene (o)	0.0647	0.00103	"	0.103	ND	62.9	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	*0.130*		"	*0.123*		*105*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.131*		"	*0.123*		*106*	*80-120*			
Matrix Spike Dup (P1J2604-MSD1)		**Source: 1J19004-49**		Prepared & Analyzed: 10/26/21						
Benzene	0.0824	0.00103	mg/kg dry	0.103	ND	79.9	80-120	10.7	20	QM-07
Toluene	0.0779	0.00103	"	0.103	ND	75.5	80-120	10.6	20	QM-07
Ethylbenzene	0.0800	0.00103	"	0.103	ND	77.6	80-120	9.17	20	QM-07
Xylene (p/m)	0.159	0.00206	"	0.206	ND	77.3	80-120	8.89	20	QM-07
Xylene (o)	0.0706	0.00103	"	0.103	ND	68.4	80-120	8.45	20	QM-07
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.124*		*104*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.132*		"	*0.124*		*107*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J1912 - * DEFAULT PREP *** **										
Blank (P1J1912-BLK1)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1J1912-BS1)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	370	1.00	mg/kg wet	400		92.6	90-110			
LCS Dup (P1J1912-BSD1)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	374	1.00	mg/kg wet	400		93.5	90-110	0.970	10	
Calibration Blank (P1J1912-CCB1)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1J1912-CCB2)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1J1912-CCV1)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	18.8		mg/kg	20.0		94.2	90-110			
Calibration Check (P1J1912-CCV2)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	19.0		mg/kg	20.0		95.2	90-110			
Calibration Check (P1J1912-CCV3)				Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	18.2		mg/kg	20.0		91.0	90-110			
Matrix Spike (P1J1912-MS1)		**Source: 1J15016-01**		Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	659	1.15	mg/kg dry	575	126	92.8	80-120			
Matrix Spike (P1J1912-MS2)		**Source: 1J19003-02**		Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	12900	27.2	mg/kg dry	2720	9840	113	80-120			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J1912 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1J1912-MSD1)	**Source: 1J15016-01**			Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	632	1.15	mg/kg dry	575	126	88.0	80-120	4.23	20	
Matrix Spike Dup (P1J1912-MSD2)	**Source: 1J19003-02**			Prepared: 10/19/21 Analyzed: 10/20/21						
Chloride	12700	27.2	mg/kg dry	2720	9840	104	80-120	2.04	20	
Batch P1J2002 - * DEFAULT PREP *** **										
Blank (P1J2002-BLK1)				Prepared & Analyzed: 10/20/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1J2002-BS1)				Prepared & Analyzed: 10/20/21						
Chloride	412	1.00	mg/kg wet	400		103	90-110			
LCS Dup (P1J2002-BSD1)				Prepared & Analyzed: 10/20/21						
Chloride	414	1.00	mg/kg wet	400		103	90-110	0.513	10	
Calibration Blank (P1J2002-CCB1)				Prepared & Analyzed: 10/20/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1J2002-CCB2)				Prepared & Analyzed: 10/20/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1J2002-CCV1)				Prepared & Analyzed: 10/20/21						
Chloride	21.1		mg/kg	20.0		105	90-110			
Calibration Check (P1J2002-CCV2)				Prepared & Analyzed: 10/20/21						
Chloride	20.8		mg/kg	20.0		104	90-110			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2002 - * DEFAULT PREP *** **										
Calibration Check (P1J2002-CCV3)				Prepared & Analyzed: 10/20/21						
Chloride	20.9		mg/kg	20.0		105	90-110			
Matrix Spike (P1J2002-MS1)		Source: 1J19003-12		Prepared & Analyzed: 10/20/21						
Chloride	10900	27.8	mg/kg dry	2780	8470	86.0	80-120			
Matrix Spike (P1J2002-MS2)		Source: 1J19003-22		Prepared & Analyzed: 10/20/21						
Chloride	18700	51.5	mg/kg dry	5150	13900	94.1	80-120			
Matrix Spike Dup (P1J2002-MSD1)		Source: 1J19003-12		Prepared & Analyzed: 10/20/21						
Chloride	10900	27.8	mg/kg dry	2780	8470	86.0	80-120	0.0230	20	
Matrix Spike Dup (P1J2002-MSD2)		Source: 1J19003-22		Prepared & Analyzed: 10/20/21						
Chloride	18700	51.5	mg/kg dry	5150	13900	94.4	80-120	0.0772	20	
Batch P1J2007 - * DEFAULT PREP *** **										
Blank (P1J2007-BLK1)				Prepared & Analyzed: 10/20/21						
% Moisture	ND	0.1	%							
Duplicate (P1J2007-DUP1)		Source: 1J19003-09		Prepared & Analyzed: 10/20/21						
% Moisture	12.0	0.1	%		13.0			8.00	20	
Duplicate (P1J2007-DUP2)		Source: 1J19003-19		Prepared & Analyzed: 10/20/21						
% Moisture	7.0	0.1	%		7.0			0.00	20	
Batch P1J2101 - * DEFAULT PREP *** **										
Blank (P1J2101-BLK1)				Prepared & Analyzed: 10/21/21						
Chloride	ND	1.00	mg/kg wet							

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2101 - * DEFAULT PREP *** **										
LCS (P1J2101-BS1)				Prepared & Analyzed: 10/21/21						
Chloride	404	1.00	mg/kg wet	400		101	90-110			
LCS Dup (P1J2101-BSD1)				Prepared & Analyzed: 10/21/21						
Chloride	402	1.00	mg/kg wet	400		100	90-110	0.499	10	
Calibration Blank (P1J2101-CCB1)				Prepared & Analyzed: 10/21/21						
Chloride	-0.190		mg/kg wet							
Calibration Blank (P1J2101-CCB2)				Prepared & Analyzed: 10/21/21						
Chloride	-0.202		mg/kg wet							
Calibration Check (P1J2101-CCV1)				Prepared & Analyzed: 10/21/21						
Chloride	20.2		mg/kg	20.0		101	90-110			
Calibration Check (P1J2101-CCV2)				Prepared & Analyzed: 10/21/21						
Chloride	18.9		mg/kg	20.0		94.7	90-110			
Calibration Check (P1J2101-CCV3)				Prepared & Analyzed: 10/21/21						
Chloride	20.2		mg/kg	20.0		101	90-110			
Matrix Spike (P1J2101-MS1)		**Source: 1J19003-32**		Prepared & Analyzed: 10/21/21						
Chloride	12800	27.5	mg/kg dry	2750	10200	94.2	80-120			
Matrix Spike (P1J2101-MS2)		**Source: 1J19003-42**		Prepared & Analyzed: 10/21/21						
Chloride	17600	54.9	mg/kg dry	5490	13100	82.2	80-120			
Matrix Spike Dup (P1J2101-MSD1)		**Source: 1J19003-32**		Prepared & Analyzed: 10/21/21						
Chloride	12800	27.5	mg/kg dry	2750	10200	93.5	80-120	0.135	20	

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Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2101 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1J2101-MSD2)	**Source: 1J19003-42**			Prepared & Analyzed: 10/21/21						
Chloride	18200	54.9	mg/kg dry	5490	13100	93.4	80-120	3.44	20	
Batch P1J2103 - * DEFAULT PREP *** **										
Blank (P1J2103-BLK1)				Prepared & Analyzed: 10/21/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1J2103-BS1)				Prepared & Analyzed: 10/21/21						
Chloride	416	1.00	mg/kg wet	400		104	90-110			
LCS Dup (P1J2103-BSD1)				Prepared & Analyzed: 10/21/21						
Chloride	411	1.00	mg/kg wet	400		103	90-110	1.29	10	
Calibration Blank (P1J2103-CCB1)				Prepared & Analyzed: 10/21/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1J2103-CCB2)				Prepared & Analyzed: 10/21/21						
Chloride	-0.187		mg/kg wet							
Calibration Check (P1J2103-CCV1)				Prepared & Analyzed: 10/21/21						
Chloride	20.2		mg/kg	20.0		101	90-110			
Calibration Check (P1J2103-CCV2)				Prepared & Analyzed: 10/21/21						
Chloride	20.2		mg/kg	20.0		101	90-110			
Calibration Check (P1J2103-CCV3)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	19.4		mg/kg	20.0		97.2	90-110			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2103 - * DEFAULT PREP *** **										
Matrix Spike (P1J2103-MS1)	**Source: 1J19003-52**			Prepared & Analyzed: 10/21/21						
Chloride	11100	26.0	mg/kg dry	2600	8500	101	80-120			
Matrix Spike (P1J2103-MS2)	**Source: 1J19004-02**			Prepared & Analyzed: 10/21/21						
Chloride	19000	57.5	mg/kg dry	5750	12900	107	80-120			
Matrix Spike Dup (P1J2103-MSD1)	**Source: 1J19003-52**			Prepared & Analyzed: 10/21/21						
Chloride	10700	26.0	mg/kg dry	2600	8500	86.1	80-120	3.49	20	
Matrix Spike Dup (P1J2103-MSD2)	**Source: 1J19004-02**			Prepared & Analyzed: 10/21/21						
Chloride	19100	57.5	mg/kg dry	5750	12900	109	80-120	0.521	20	
Batch P1J2106 - * DEFAULT PREP *** **										
Blank (P1J2106-BLK1)				Prepared & Analyzed: 10/21/21						
% Moisture	ND	0.1	%							
Blank (P1J2106-BLK2)				Prepared & Analyzed: 10/21/21						
% Moisture	ND	0.1	%							
Duplicate (P1J2106-DUP1)	**Source: 1J19003-34**			Prepared & Analyzed: 10/21/21						
% Moisture	2.0	0.1	%		2.0			0.00	20	
Duplicate (P1J2106-DUP2)	**Source: 1J19003-44**			Prepared & Analyzed: 10/21/21						
% Moisture	2.0	0.1	%		2.0			0.00	20	
Duplicate (P1J2106-DUP3)	**Source: 1J19003-59**			Prepared & Analyzed: 10/21/21						
% Moisture	11.0	0.1	%		10.0			9.52	20	

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Larson & Associates, Inc.	Project: Mack PW
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Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2106 - * DEFAULT PREP *** **										
Duplicate (P1J2106-DUP4)		**Source: 1J19004-09**		Prepared & Analyzed: 10/21/21						
% Moisture	9.0	0.1	%		10.0			10.5	20	
Duplicate (P1J2106-DUP5)		**Source: 1J19004-24**		Prepared & Analyzed: 10/21/21						
% Moisture	2.0	0.1	%		2.0			0.00	20	
Duplicate (P1J2106-DUP6)		**Source: 1J19004-34**		Prepared & Analyzed: 10/21/21						
% Moisture	2.0	0.1	%		4.0			66.7	20	
Duplicate (P1J2106-DUP7)		**Source: 1J19004-49**		Prepared & Analyzed: 10/21/21						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Duplicate (P1J2106-DUP8)		**Source: 1J19004-59**		Prepared & Analyzed: 10/21/21						
% Moisture	3.0	0.1	%		3.0			0.00	20	
Duplicate (P1J2106-DUP9)		**Source: 1J19008-01**		Prepared & Analyzed: 10/21/21						
% Moisture	2.0	0.1	%		2.0			0.00	20	
Duplicate (P1J2106-DUPA)		**Source: 1J19010-10**		Prepared & Analyzed: 10/21/21						
% Moisture	7.0	0.1	%		6.0			15.4	20	
Batch P1J2108 - * DEFAULT PREP *** **										
Blank (P1J2108-BLK1)				Prepared & Analyzed: 10/21/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1J2108-BS1)				Prepared & Analyzed: 10/21/21						
Chloride	421	1.00	mg/kg wet	400		105	90-110			

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Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2108 - * DEFAULT PREP *** **										
LCS Dup (P1J2108-BSD1)				Prepared & Analyzed: 10/21/21						
Chloride	426	1.00	mg/kg wet	400		106	90-110	1.10	10	
Calibration Blank (P1J2108-CCB1)				Prepared & Analyzed: 10/21/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1J2108-CCB2)				Prepared & Analyzed: 10/21/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1J2108-CCV1)				Prepared & Analyzed: 10/21/21						
Chloride	21.1		mg/kg	20.0		105	90-110			
Calibration Check (P1J2108-CCV2)				Prepared & Analyzed: 10/21/21						
Chloride	21.3		mg/kg	20.0		106	90-110			
Calibration Check (P1J2108-CCV3)				Prepared & Analyzed: 10/21/21						
Chloride	21.3		mg/kg	20.0		107	90-110			
Matrix Spike (P1J2108-MS1)		**Source: 1J19004-12**		Prepared & Analyzed: 10/21/21						
Chloride	11600	27.8	mg/kg dry	2780	8700	105	80-120			
Matrix Spike (P1J2108-MS2)		**Source: 1J19004-22**		Prepared & Analyzed: 10/21/21						
Chloride	11300	26.3	mg/kg dry	2630	8780	97.0	80-120			
Matrix Spike Dup (P1J2108-MSD1)		**Source: 1J19004-12**		Prepared & Analyzed: 10/21/21						
Chloride	11600	27.8	mg/kg dry	2780	8700	105	80-120	0.0311	20	
Matrix Spike Dup (P1J2108-MSD2)		**Source: 1J19004-22**		Prepared & Analyzed: 10/21/21						
Chloride	11300	26.3	mg/kg dry	2630	8780	95.9	80-120	0.265	20	

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2112 - * DEFAULT PREP *** **										
Blank (P1J2112-BLK1)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1J2112-BS1)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	400	1.00	mg/kg wet	400		100	90-110			
LCS Dup (P1J2112-BSD1)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	389	1.00	mg/kg wet	400		97.2	90-110	2.86	10	
Calibration Blank (P1J2112-CCB1)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1J2112-CCB2)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1J2112-CCV1)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	19.4		mg/kg	20.0		97.2	90-110			
Calibration Check (P1J2112-CCV2)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	20.5		mg/kg	20.0		103	90-110			
Calibration Check (P1J2112-CCV3)				Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	20.2		mg/kg	20.0		101	90-110			
Matrix Spike (P1J2112-MS1)		**Source: 1J19004-32**		Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	47100	52.1	mg/kg dry	5210	43500	69.6	80-120			QM-07
Matrix Spike (P1J2112-MS2)		**Source: 1J19004-42**		Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	18000	52.6	mg/kg dry	5260	12800	99.0	80-120			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2112 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1J2112-MSD1)	**Source: 1J19004-32**			Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	48200	52.1	mg/kg dry	5210	43500	89.7	80-120	2.20	20	
Matrix Spike Dup (P1J2112-MSD2)	**Source: 1J19004-42**			Prepared: 10/21/21 Analyzed: 10/22/21						
Chloride	17300	52.6	mg/kg dry	5260	12800	85.2	80-120	4.14	20	
Batch P1J2202 - * DEFAULT PREP *** **										
Blank (P1J2202-BLK1)				Prepared & Analyzed: 10/22/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1J2202-BS1)				Prepared & Analyzed: 10/22/21						
Chloride	402	1.00	mg/kg wet	400		101	90-110			
LCS Dup (P1J2202-BSD1)				Prepared & Analyzed: 10/22/21						
Chloride	398	1.00	mg/kg wet	400		99.5	90-110	1.06	10	
Calibration Blank (P1J2202-CCB1)				Prepared & Analyzed: 10/22/21						
Chloride	-0.200		mg/kg wet							
Calibration Blank (P1J2202-CCB2)				Prepared & Analyzed: 10/22/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1J2202-CCV1)				Prepared & Analyzed: 10/22/21						
Chloride	19.9		mg/kg	20.0		99.4	90-110			
Calibration Check (P1J2202-CCV2)				Prepared & Analyzed: 10/22/21						
Chloride	20.0		mg/kg	20.0		99.8	90-110			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2202 - * DEFAULT PREP *** **										
Calibration Check (P1J2202-CCV3)				Prepared & Analyzed: 10/22/21						
Chloride	20.1		mg/kg	20.0		100	90-110			
Matrix Spike (P1J2202-MS1)		**Source: 1J19004-52**		Prepared & Analyzed: 10/22/21						
Chloride	3970	10.2	mg/kg dry	1020	3110	84.4	80-120			
Matrix Spike (P1J2202-MS2)		**Source: 1J19004-62**		Prepared & Analyzed: 10/22/21						
Chloride	30000	56.2	mg/kg dry	5620	24200	103	80-120			
Matrix Spike Dup (P1J2202-MSD1)		**Source: 1J19004-52**		Prepared & Analyzed: 10/22/21						
Chloride	4070	10.2	mg/kg dry	1020	3110	93.9	80-120	2.43	20	
Matrix Spike Dup (P1J2202-MSD2)		**Source: 1J19004-62**		Prepared & Analyzed: 10/22/21						
Chloride	29000	56.2	mg/kg dry	5620	24200	85.4	80-120	3.39	20	

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2003 - TX 1005										
Blank (P1J2003-BLK1)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*96.7*		"	*100*		*96.7*	*70-130*			
Surrogate: o-Terphenyl	*50.2*		"	*50.0*		*100*	*70-130*			
LCS (P1J2003-BS1)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	1070	25.0	mg/kg wet	1000		107	75-125			
>C12-C28	973	25.0	"	1000		97.3	75-125			
Surrogate: 1-Chlorooctane	*103*		"	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*50.1*		"	*50.0*		*100*	*70-130*			
LCS Dup (P1J2003-BSD1)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	1070	25.0	mg/kg wet	1000		107	75-125	0.0400	20	
>C12-C28	973	25.0	"	1000		97.3	75-125	0.0401	20	
Surrogate: 1-Chlorooctane	*104*		"	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*51.0*		"	*50.0*		*102*	*70-130*			
Calibration Check (P1J2003-CCV1)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	462	25.0	mg/kg wet	500		92.4	85-115			
>C12-C28	451	25.0	"	500		90.2	85-115			
Surrogate: 1-Chlorooctane	*110*		"	*100*		*110*	*70-130*			
Surrogate: o-Terphenyl	*48.4*		"	*50.0*		*96.8*	*70-130*			
Calibration Check (P1J2003-CCV2)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	434	25.0	mg/kg wet	500		86.7	85-115			
>C12-C28	433	25.0	"	500		86.7	85-115			
Surrogate: 1-Chlorooctane	*105*		"	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*48.0*		"	*50.0*		*96.0*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2003 - TX 1005										
Calibration Check (P1J2003-CCV3)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	456	25.0	mg/kg wet	500		91.3	85-115			
>C12-C28	460	25.0	"	500		92.0	85-115			
Surrogate: 1-Chlorooctane	*112*		*"*	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*49.5*		*"*	*50.0*		*98.9*	*70-130*			
Matrix Spike (P1J2003-MS1)		**Source: 1J19003-15**		Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	935	27.5	mg/kg dry	1100	17.8	83.4	75-125			QM-05
>C12-C28	869	27.5	"	1100	ND	79.1	75-125			QM-05
Surrogate: 1-Chlorooctane	*122*		*"*	*110*		*111*	*70-130*			
Surrogate: o-Terphenyl	*49.4*		*"*	*54.9*		*89.9*	*70-130*			
Matrix Spike Dup (P1J2003-MSD1)		**Source: 1J19003-15**		Prepared: 10/20/21 Analyzed: 10/26/21						
C6-C12	968	27.5	mg/kg dry	1100	17.8	86.5	75-125	3.57	20	
>C12-C28	925	27.5	"	1100	ND	84.1	75-125	6.16	20	
Surrogate: 1-Chlorooctane	*135*		*"*	*110*		*122*	*70-130*			
Surrogate: o-Terphenyl	*56.0*		*"*	*54.9*		*102*	*70-130*			
Batch P1J2004 - TX 1005										
Blank (P1J2004-BLK1)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*89.5*		*"*	*100*		*89.5*	*70-130*			
Surrogate: o-Terphenyl	*46.5*		*"*	*50.0*		*93.1*	*70-130*			
LCS (P1J2004-BS1)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125			
>C12-C28	927	25.0	"	1000		92.7	75-125			
Surrogate: 1-Chlorooctane	*97.7*		*"*	*100*		*97.7*	*70-130*			
Surrogate: o-Terphenyl	*54.0*		*"*	*50.0*		*108*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2004 - TX 1005										
LCS Dup (P1J2004-BSD1)				Prepared: 10/20/21 Analyzed: 10/22/21						
C6-C12	1020	25.0	mg/kg wet	1000		102	75-125	1.63	20	
>C12-C28	916	25.0	"	1000		91.6	75-125	1.13	20	
Surrogate: 1-Chlorooctane	*98.0*		*"*	*100*		*98.0*	*70-130*			
Surrogate: o-Terphenyl	*52.9*		*"*	*50.0*		*106*	*70-130*			
Calibration Check (P1J2004-CCV1)				Prepared: 10/20/21 Analyzed: 10/24/21						
C6-C12	482	25.0	mg/kg wet	500		96.3	85-115			
>C12-C28	489	25.0	"	500		97.7	85-115			
Surrogate: 1-Chlorooctane	*113*		*"*	*100*		*113*	*70-130*			
Surrogate: o-Terphenyl	*48.4*		*"*	*50.0*		*96.9*	*70-130*			
Calibration Check (P1J2004-CCV2)				Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	442	25.0	mg/kg wet	500		88.3	85-115			
>C12-C28	440	25.0	"	500		88.1	85-115			
Surrogate: 1-Chlorooctane	*102*		*"*	*100*		*102*	*70-130*			
Surrogate: o-Terphenyl	*44.0*		*"*	*50.0*		*88.1*	*70-130*			
Matrix Spike (P1J2004-MS1)		**Source: 1J19003-35**		Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	876	26.0	mg/kg dry	1040	15.4	82.6	75-125			
>C12-C28	826	26.0	"	1040	ND	79.3	75-125			
Surrogate: 1-Chlorooctane	*118*		*"*	*104*		*114*	*70-130*			
Surrogate: o-Terphenyl	*47.6*		*"*	*52.1*		*91.4*	*70-130*			
Matrix Spike Dup (P1J2004-MSD1)		**Source: 1J19003-35**		Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	875	26.0	mg/kg dry	1040	15.4	82.5	75-125	0.0581	20	
>C12-C28	820	26.0	"	1040	ND	78.8	75-125	0.714	20	
Surrogate: 1-Chlorooctane	*127*		*"*	*104*		*122*	*70-130*			
Surrogate: o-Terphenyl	*53.5*		*"*	*52.1*		*103*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2005 - TX 1005										
Blank (P1J2005-BLK1)				Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*86.7*		*"*	*100*		*86.7*	*70-130*			
Surrogate: o-Terphenyl	*45.7*		*"*	*50.0*		*91.4*	*70-130*			
LCS (P1J2005-BS1)				Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	977	25.0	mg/kg wet	1000		97.7	75-125			
>C12-C28	909	25.0	"	1000		90.9	75-125			
Surrogate: 1-Chlorooctane	*130*		*"*	*100*		*130*	*70-130*			
Surrogate: o-Terphenyl	*51.6*		*"*	*50.0*		*103*	*70-130*			
LCS Dup (P1J2005-BSD1)				Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	1240	25.0	mg/kg wet	1000		124	75-125	23.4	20	R
>C12-C28	1120	25.0	"	1000		112	75-125	20.7	20	R
Surrogate: 1-Chlorooctane	*119*		*"*	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*66.0*		*"*	*50.0*		*132*	*70-130*			*S-GC*
Calibration Check (P1J2005-CCV1)				Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	438	25.0	mg/kg wet	500		87.6	85-115			
>C12-C28	437	25.0	"	500		87.4	85-115			
Surrogate: 1-Chlorooctane	*100*		*"*	*100*		*100*	*70-130*			
Surrogate: o-Terphenyl	*44.8*		*"*	*50.0*		*89.6*	*70-130*			
Calibration Check (P1J2005-CCV2)				Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	472	25.0	mg/kg wet	500		94.3	85-115			
>C12-C28	473	25.0	"	500		94.7	85-115			
Surrogate: 1-Chlorooctane	*108*		*"*	*100*		*108*	*70-130*			
Surrogate: o-Terphenyl	*47.1*		*"*	*50.0*		*94.2*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2005 - TX 1005										
Calibration Check (P1J2005-CCV3)				Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	467	25.0	mg/kg wet	500		93.4	85-115			
>C12-C28	473	25.0	"	500		94.5	85-115			
Surrogate: 1-Chlorooctane	*108*		*"*	*100*		*108*	*70-130*			
Surrogate: o-Terphenyl	*46.7*		*"*	*50.0*		*93.4*	*70-130*			
Matrix Spike (P1J2005-MS1)		**Source: 1J19003-55**		Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	1040	25.3	mg/kg dry	1010	16.6	102	75-125			
>C12-C28	945	25.3	"	1010	ND	93.5	75-125			
Surrogate: 1-Chlorooctane	*98.6*		*"*	*101*		*97.6*	*70-130*			
Surrogate: o-Terphenyl	*53.4*		*"*	*50.5*		*106*	*70-130*			
Matrix Spike Dup (P1J2005-MSD1)		**Source: 1J19003-55**		Prepared: 10/20/21 Analyzed: 10/23/21						
C6-C12	1040	25.3	mg/kg dry	1010	16.6	101	75-125	0.532	20	
>C12-C28	941	25.3	"	1010	ND	93.1	75-125	0.435	20	
Surrogate: 1-Chlorooctane	*98.6*		*"*	*101*		*97.6*	*70-130*			
Surrogate: o-Terphenyl	*55.1*		*"*	*50.5*		*109*	*70-130*			
Batch P1J2105 - TX 1005										
Blank (P1J2105-BLK1)				Prepared: 10/21/21 Analyzed: 10/24/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*83.6*		*"*	*100*		*83.6*	*70-130*			
Surrogate: o-Terphenyl	*43.9*		*"*	*50.0*		*87.7*	*70-130*			
LCS (P1J2105-BS1)				Prepared: 10/21/21 Analyzed: 10/24/21						
C6-C12	976	25.0	mg/kg wet	1000		97.6	75-125			
>C12-C28	898	25.0	"	1000		89.8	75-125			
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*47.3*		*"*	*50.0*		*94.7*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2105 - TX 1005										
LCS Dup (P1J2105-BSD1)				Prepared: 10/21/21 Analyzed: 10/24/21						
C6-C12	993	25.0	mg/kg wet	1000		99.3	75-125	1.66	20	
>C12-C28	919	25.0	"	1000		91.9	75-125	2.31	20	
Surrogate: 1-Chlorooctane	*127*		*"*	*100*		*127*	*70-130*			
Surrogate: o-Terphenyl	*49.7*		*"*	*50.0*		*99.5*	*70-130*			
Calibration Check (P1J2105-CCV1)				Prepared: 10/21/21 Analyzed: 10/24/21						
C6-C12	459	25.0	mg/kg wet	500		91.8	85-115			
>C12-C28	451	25.0	"	500		90.2	85-115			
Surrogate: 1-Chlorooctane	*104*		*"*	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*45.2*		*"*	*50.0*		*90.3*	*70-130*			
Calibration Check (P1J2105-CCV2)				Prepared: 10/21/21 Analyzed: 10/24/21						
C6-C12	464	25.0	mg/kg wet	500		92.7	85-115			
>C12-C28	459	25.0	"	500		91.8	85-115			
Surrogate: 1-Chlorooctane	*108*		*"*	*100*		*108*	*70-130*			
Surrogate: o-Terphenyl	*47.6*		*"*	*50.0*		*95.1*	*70-130*			
Matrix Spike (P1J2105-MS1)	**Source: 1J19004-15**			Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	940	26.9	mg/kg dry	1080	18.9	85.7	75-125			
>C12-C28	886	26.9	"	1080	ND	82.4	75-125			
Surrogate: 1-Chlorooctane	*131*		*"*	*108*		*122*	*70-130*			
Surrogate: o-Terphenyl	*50.4*		*"*	*53.8*		*93.8*	*70-130*			
Matrix Spike Dup (P1J2105-MSD1)	**Source: 1J19004-15**			Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	970	26.9	mg/kg dry	1080	18.9	88.5	75-125	3.20	20	
>C12-C28	890	26.9	"	1080	ND	82.8	75-125	0.433	20	
Surrogate: 1-Chlorooctane	*135*		*"*	*108*		*126*	*70-130*			
Surrogate: o-Terphenyl	*51.2*		*"*	*53.8*		*95.2*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2107 - TX 1005										
Blank (P1J2107-BLK1)				Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*80.8*		*"*	*100*		*80.8*	*70-130*			
Surrogate: o-Terphenyl	*42.2*		*"*	*50.0*		*84.4*	*70-130*			
LCS (P1J2107-BS1)				Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	984	25.0	mg/kg wet	1000		98.4	75-125			
>C12-C28	892	25.0	"	1000		89.2	75-125			
Surrogate: 1-Chlorooctane	*87.2*		*"*	*100*		*87.2*	*70-130*			
Surrogate: o-Terphenyl	*43.1*		*"*	*50.0*		*86.1*	*70-130*			
LCS Dup (P1J2107-BSD1)				Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	1160	25.0	mg/kg wet	1000		116	75-125	16.4	20	
>C12-C28	1040	25.0	"	1000		104	75-125	15.4	20	
Surrogate: 1-Chlorooctane	*104*		*"*	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*51.6*		*"*	*50.0*		*103*	*70-130*			
Calibration Check (P1J2107-CCV1)				Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	457	25.0	mg/kg wet	500		91.5	85-115			
>C12-C28	455	25.0	"	500		91.0	85-115			
Surrogate: 1-Chlorooctane	*104*		*"*	*100*		*104*	*70-130*			
Surrogate: o-Terphenyl	*44.9*		*"*	*50.0*		*89.7*	*70-130*			
Calibration Check (P1J2107-CCV2)				Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	457	25.0	mg/kg wet	500		91.4	85-115			
>C12-C28	450	25.0	"	500		90.0	85-115			
Surrogate: 1-Chlorooctane	*103*		*"*	*100*		*103*	*70-130*			
Surrogate: o-Terphenyl	*45.3*		*"*	*50.0*		*90.7*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2107 - TX 1005										
Calibration Check (P1J2107-CCV3)				Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	466	25.0	mg/kg wet	500		93.2	85-115			
>C12-C28	475	25.0	"	500		94.9	85-115			
Surrogate: 1-Chlorooctane	*110*		*"*	*100*		*110*	*70-130*			
Surrogate: o-Terphenyl	*46.4*		*"*	*50.0*		*92.7*	*70-130*			
Matrix Spike (P1J2107-MS1)		**Source: 1J19004-35**		Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	1010	25.8	mg/kg dry	1030	17.1	96.2	75-125			QM-05
>C12-C28	892	25.8	"	1030	ND	86.6	75-125			QM-05
Surrogate: 1-Chlorooctane	*103*		*"*	*103*		*100*	*70-130*			
Surrogate: o-Terphenyl	*57.0*		*"*	*51.5*		*111*	*70-130*			
Matrix Spike Dup (P1J2107-MSD1)		**Source: 1J19004-35**		Prepared: 10/21/21 Analyzed: 10/25/21						
C6-C12	1130	25.8	mg/kg dry	1030	17.1	108	75-125	11.2	20	QM-05
>C12-C28	1030	25.8	"	1030	ND	99.8	75-125	14.2	20	QM-05
Surrogate: 1-Chlorooctane	*117*		*"*	*103*		*113*	*70-130*			
Surrogate: o-Terphenyl	*59.0*		*"*	*51.5*		*115*	*70-130*			
Batch P1J2111 - TX 1005										
Blank (P1J2111-BLK1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*110*		*"*	*100*		*110*	*70-130*			
Surrogate: o-Terphenyl	*58.3*		*"*	*50.0*		*117*	*70-130*			
LCS (P1J2111-BS1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	986	25.0	mg/kg wet	1000		98.6	75-125			
>C12-C28	995	25.0	"	1000		99.5	75-125			
Surrogate: 1-Chlorooctane	*120*		*"*	*100*		*120*	*70-130*			
Surrogate: o-Terphenyl	*63.0*		*"*	*50.0*		*126*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2111 - TX 1005										
LCS Dup (P1J2111-BSD1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	964	25.0	mg/kg wet	1000		96.4	75-125	2.25	20	
>C12-C28	973	25.0	"	1000		97.3	75-125	2.23	20	
Surrogate: 1-Chlorooctane	*119*		*"*	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*64.7*		*"*	*50.0*		*129*	*70-130*			
Calibration Check (P1J2111-CCV1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	460	25.0	mg/kg wet	500		92.1	85-115			
>C12-C28	486	25.0	"	500		97.2	85-115			
Surrogate: 1-Chlorooctane	*116*		*"*	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*63.8*		*"*	*50.0*		*128*	*70-130*			
Calibration Check (P1J2111-CCV2)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	477	25.0	mg/kg wet	500		95.5	85-115			
>C12-C28	498	25.0	"	500		99.6	85-115			
Surrogate: 1-Chlorooctane	*119*		*"*	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*64.4*		*"*	*50.0*		*129*	*70-130*			
Calibration Check (P1J2111-CCV3)				Prepared: 10/21/21 Analyzed: 10/27/21						
C6-C12	459	25.0	mg/kg wet	500		91.8	85-115			
>C12-C28	485	25.0	"	500		96.9	85-115			
Surrogate: 1-Chlorooctane	*115*		*"*	*100*		*115*	*70-130*			
Surrogate: o-Terphenyl	*62.8*		*"*	*50.0*		*126*	*70-130*			
Matrix Spike (P1J2111-MS1)	**Source: 1J19004-55**			Prepared: 10/21/21 Analyzed: 10/27/21						
C6-C12	1030	25.3	mg/kg dry	1010	11.6	101	75-125			
>C12-C28	1040	25.3	"	1010	14.1	101	75-125			
Surrogate: 1-Chlorooctane	*115*		*"*	*101*		*114*	*70-130*			
Surrogate: o-Terphenyl	*58.8*		*"*	*50.5*		*116*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2111 - TX 1005										
Matrix Spike Dup (P1J2111-MSD1)	**Source: 1J19004-55**			Prepared: 10/21/21 Analyzed: 10/27/21						
C6-C12	1030	25.3	mg/kg dry	1010	11.6	101	75-125	0.749	20	
>C12-C28	1020	25.3	"	1010	14.1	99.9	75-125	1.53	20	
Surrogate: 1-Chlorooctane	*112*		*"*	*101*		*111*	*70-130*			
Surrogate: o-Terphenyl	*57.5*		*"*	*50.5*		*114*	*70-130*			
Batch P1J2205 - TX 1005										
Blank (P1J2205-BLK1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*105*		*"*	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*56.1*		*"*	*50.0*		*112*	*70-130*			
LCS (P1J2205-BS1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	1050	25.0	mg/kg wet	1000		105	75-125			
>C12-C28	954	25.0	"	1000		95.4	75-125			
Surrogate: 1-Chlorooctane	*112*		*"*	*100*		*112*	*70-130*			
Surrogate: o-Terphenyl	*60.4*		*"*	*50.0*		*121*	*70-130*			
LCS Dup (P1J2205-BSD1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	1080	25.0	mg/kg wet	1000		108	75-125	2.80	20	
>C12-C28	981	25.0	"	1000		98.1	75-125	2.78	20	
Surrogate: 1-Chlorooctane	*116*		*"*	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*64.0*		*"*	*50.0*		*128*	*70-130*			
Calibration Check (P1J2205-CCV1)				Prepared: 10/21/21 Analyzed: 10/26/21						
C6-C12	465	25.0	mg/kg wet	500		93.0	85-115			
>C12-C28	471	25.0	"	500		94.2	85-115			
Surrogate: 1-Chlorooctane	*129*		*"*	*100*		*129*	*70-130*			
Surrogate: o-Terphenyl	*59.8*		*"*	*50.0*		*120*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1J2205 - TX 1005										
Calibration Check (P1J2205-CCV2)				Prepared: 10/21/21 Analyzed: 10/27/21						
C6-C12	467	25.0	mg/kg wet	500		93.5	85-115			
>C12-C28	463	25.0	"	500		92.7	85-115			
Surrogate: 1-Chlorooctane	*126*		*"*	*100*		*126*	*70-130*			
Surrogate: o-Terphenyl	*58.6*		*"*	*50.0*		*117*	*70-130*			
Calibration Check (P1J2205-CCV3)				Prepared: 10/21/21 Analyzed: 10/27/21						
C6-C12	472	25.0	mg/kg wet	500		94.3	85-115			
>C12-C28	478	25.0	"	500		95.6	85-115			
Surrogate: 1-Chlorooctane	*126*		*"*	*100*		*126*	*70-130*			
Surrogate: o-Terphenyl	*58.8*		*"*	*50.0*		*118*	*70-130*			
Matrix Spike (P1J2205-MS1)		**Source: 1J20006-04**		Prepared: 10/21/21 Analyzed: 10/27/21						
C6-C12	912	25.0	mg/kg dry	1000	14.6	89.7	75-125			
>C12-C28	852	25.0	"	1000	ND	85.2	75-125			
Surrogate: 1-Chlorooctane	*120*		*"*	*100*		*120*	*70-130*			
Surrogate: o-Terphenyl	*42.6*		*"*	*50.0*		*85.3*	*70-130*			
Matrix Spike Dup (P1J2205-MSD1)		**Source: 1J20006-04**		Prepared: 10/21/21 Analyzed: 10/27/21						
C6-C12	909	25.0	mg/kg dry	1000	14.6	89.4	75-125	0.358	20	
>C12-C28	843	25.0	"	1000	ND	84.3	75-125	0.995	20	
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*46.1*		*"*	*50.0*		*92.1*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
ROI	Received on Ice
R	The RPD exceeded the method control limit. The individual analyte QA/QC recoveries, however, were within acceptance limits.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
NPBEL C(	Chain of Custody was not generated at PBELAB
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 10/28/2021

Brent Barron, Laboratory Director/Technical Director

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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If you have received this material in error, please notify us immediately at 432-686-7235.

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L: MH CK: MH

№ 1806

CHAIN-OF-CUSTOD

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Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/21 PAGE 1 OF 9

PO#: LAB WORK ORDER#: 19003

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: DN + DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX 8021 ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐	8082 PCBS ☐	8151 HERBICIDES ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-1	1	10/19/21	1001	S	1				X		X		X	X	X	X															X		
B-2	2	"	1002	"	1				"		"		"	"	"	"															"		
B-3	3		1003																														
B-4	4		1004																														
B-5	5		1005																														
B-6	6		1006																														
B-7	7		1007																														
B-8	8		1008																														
B-9	9		1009																														
B-10	10		1010																														
B-11	11		1011																														
B-12	12		1012																														
B-13	13		1013																														
B-14	14		1014																														
B-15	15	"	1015	"	"				"		"		"	"	"	"															"		

TOTAL

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature) Thomas Bledsoe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: -5.5 -4.5 THERM#: CF#1 L2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Page 355 of 904

№ 1807

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/2021 PAGE 2 OF 9

PO#: LAB WORK ORDER#: 1019003

PROJECT LOCATION OR NAME: mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: RW & DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST / NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ | OIL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-16	16	10/18/21	1016	S	1				X		X		X	X	X													X		
B-17	17	"	1017	"	"				"		"		"	"	"													"		
B-18	18	"	1018	"	"				"		"		"	"	"													"		
B-19	19	"	1019	"	"				"		"		"	"	"													"		
B-20	20	"	1020	"	"				"		"		"	"	"													"		
B-21	21	"	1021	"	"				"		"		"	"	"													"		
B-22	22	"	1022	"	"				"		"		"	"	"													"		
B-23	23	"	1023	"	"				"		"		"	"	"													"		
B-24	24	"	1024	"	"				"		"		"	"	"													"		
B-25	25	"	1025	"	"				"		"		"	"	"													"		
B-26	26	"	1026	"	"				"		"		"	"	"													"		
B-27	27	"	1027	"	"				"		"		"	"	"													"		
B-28	28	"	1028	"	"				"		"		"	"	"													"		
B-29	29	"	1029	"	"				"		"		"	"	"													"		
B-30	30	"	1030	"	"				"		"		"	"	"													"		
TOTAL																														

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature) Nina Bledsoe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: -5.5 -4.5 THERM#: CF#1 C2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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CHAIN-OF-CUSTOD

Page 177 of 183

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/2021 PAGE 3 OF 9

PO#: LAB WORK ORDER#: 1J19003

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: RN & DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST / NM

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Time ~~Date~~	~~Date~~ Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒	TRPH 418.1 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☐	CHLORIDE ☒	FIELD NOTES
B-31	31	1031	10/18/21	S	1				X		X	X	X	X		X	
B-32	32	1032															
B-33	33	1033															
B-34	34	1034															
B-35	35	1035															
B-36	36	1036															
B-37	37	1037															
B-38	38	1038															
B-39	39	1039															
B-40	40	1040															
B-41	41	1041															
B-42	42	1042															
B-43	43	1043															
B-44	44	1044															
B-45	45	1045															
TOTAL																	

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: ~~5.5~~ 4.5 THERM#: CF#1 L2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCR: 6/16/2022 1:42:34 PM

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CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/2021 PAGE 4 OF 9

PO#: LAB WORK ORDER#: 1J19003

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: RN + DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST / NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐	pH ☐ HEXAVALENT CHROMIUM ☐ CYANIDE ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-46	46	10/19/21	1046	S	1				X		X		X	X	X	X													X	
B-47	47	"	1047	"	"																									
B-48	48	"	1048	"	"																									
B-49	49	"	1049	"	"																									
B-50	50	"	1050	"	"																									
B-51	51	"	1051	"	"																									
B-52	52	"	1052	"	"																									
B-53	53	"	1053	"	"																									
B-54	54	"	1054	"	"																									
B-55	55	"	1055	"	"																									
B-56	56	"	1056	"	"																									
B-57	57	"	1057	"	"																									
B-58	58	"	1058	"	"																									
B-59	59	"	1059	"	"																									
B-60	60	"	1100	"	"																									
TOTAL																														

RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
	10/19/21 1001	Mina Blaze
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: -0.5 -4.6 THERM#: CFH 12
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

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L: MH CK. MVM

№ 1810

CHAIN-OF-CUSTOD

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Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 10/19/2021 PAGE 5 OF 9

PO#: LAB WORK ORDER#: 1J19004

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: RW + DSC

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State: MST/MDT

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX + MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-61	1	10/18/21	1101	S	1				X		X			X	X	X													X		
B-62	2	"	1102	"	"				"		"			"	"	"													"		
B-63	3	"	1103	"	"				"		"			"	"	"													"		
B-64	4	"	1104	"	"				"		"			"	"	"													"		
B-65	5	"	1105	"	"				"		"			"	"	"													"		
B-66	6	"	1106	"	"				"		"			"	"	"													"		
B-67	7	"	1107	"	"				"		"			"	"	"													"		
B-68	8	"	1108	"	"				"		"			"	"	"													"		
B-69	9	"	1109	"	"				"		"			"	"	"													"		
B-70	10	"	1110	"	"				"		"			"	"	"													"		
B-71	11	"	1111	"	"				"		"			"	"	"													"		
B-72	12	"	1112	"	"				"		"			"	"	"													"		
B-73	13	"	1113	"	"				"		"			"	"	"													"		
B-74	14	"	1114	"	"				"		"			"	"	"													"		
B-75	15	"	1115	"	"				"		"			"	"	"													"		
TOTAL																															

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature) Alma Blasa

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.5 4.5 THERM#: CF#1 L2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

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№ 1811

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/21 PAGE 6 OF 9

PO#: LAB WORK ORDER#: D19004

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: RN & DSC

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESERVED

ANALYSES: BTEX 4 ☐ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 4 | DIESEL - MOD 8015 4 | OIL - MOD 8015 4 | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDES 1 ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	BTEX 4 ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 4	DIESEL - MOD 8015 4	OIL - MOD 8015 4	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES 1 ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-27	16	10/18/21	1117	S	1				X		X		X	X	X														X			
B-28	17	"	1118	"	"				"		"		"	"	"														"			
SW-1	18	"	1119	"	"				"		"		"	"	"														"			
SW-2	19	"	1120	"	"				"		"		"	"	"														"			
SW-3	20	"	1121	"	"				"		"		"	"	"														"			
SW-4	21	"	1122	"	"				"		"		"	"	"														"			
SW-5	22	"	1123	"	"				"		"		"	"	"														"			
SW-6	23	"	1124	"	"				"		"		"	"	"														"			
SW-7	24	"	1125	"	"				"		"		"	"	"														"			
SW-8	25	"	1126	"	"				"		"		"	"	"														"			
SW-9	26	"	1127	"	"				"		"		"	"	"														"			
SW-10	27	"	1128	"	"				"		"		"	"	"														"			
SW-11	28	"	1129	"	"				"		"		"	"	"														"			
SW-12	29	"	1130	"	"				"		"		"	"	"														"			
SW-13	30	"	1131	"	"				"		"		"	"	"														"			
TOTAL																																

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature) Tina Bledsoe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.5 / 4.5 THERM#: CF#1 12
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

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CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/21 PAGE 2 OF 9
PO#: LAB WORK ORDER#: 1J19004
PROJECT LOCATION OR NAME: Mack PW
LAI PROJECT #: 21-0105-04 COLLECTOR: RW & DSG
Data Reported to:

TRRP report? ☐ Yes ☒ No
TIME ZONE: Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☐ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☐ | DIESEL - MOD 8015 ☐ | OIL - MOD 8015 ☐ | VOC 8260 ☐ | SVOC 8270 ☐ | PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☐ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-26	31	10/18/21	1116	S	1				X		X		X	X	X														X			
SW-14	32	"	1132	"	"				"		"		"	"	"														"			
SW-15	33	"	1133	"	"				"		"		"	"	"														"			
SW-16	34	"	1134	"	"				"		"		"	"	"														"			
SW-17	35	"	1135	"	"				"		"		"	"	"														"			
SW-18	36	"	1136	"	"				"		"		"	"	"														"			
SW-19	37	"	1137	"	"				"		"		"	"	"														"			
SW-20	38	"	1138	"	"				"		"		"	"	"														"			
SW-21	39	"	1139	"	"				"		"		"	"	"														"			
SW-22	40	"	1140	"	"				"		"		"	"	"														"			
SW-23	41	"	1141	"	"				"		"		"	"	"														"			
SW-24	42	"	1142	"	"				"		"		"	"	"														"			
SW-25	43	"	1143	"	"				"		"		"	"	"														"			
SW-26	44	"	1144	"	"				"		"		"	"	"														"			
SW-27	45	"	1145	"	"				"		"		"	"	"														"			
TOTAL																																

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature) Dyna Bledsoe
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.5 -4.5 THERM#: CFH 12
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM
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CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/2021 PAGE 8 OF 9

PO#: LAB WORK ORDER#: 21P1004

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-010504 COLLECTOR: RM DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 ☐ NaOH ☐ | ICE | UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 8082 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
SW-28	46	10/18/21	1146	S	1				X		X		X	X	X													X		
SW-29	47	"	1147	"	"				"		"		"	"	"													"		
SW-30	48	"	1148	"	"				"		"		"	"	"													"		
SW-31	49	"	1149	"	"				"		"		"	"	"													"		
SW-32	50	"	1150	"	"				"		"		"	"	"													"		
SW-33	51	"	1151	"	"				"		"		"	"	"													"		
SW-34	52	"	1152	"	"				"		"		"	"	"													"		
SW-35	53	"	1153	"	"				"		"		"	"	"													"		
SW-36	54	"	1154	"	"				"		"		"	"	"													"		
SW-37	55	"	1155	"	"				"		"		"	"	"													"		
SW-38	56	"	1156	"	"				"		"		"	"	"													"		
SW-39	57	"	1157	"	"				"		"		"	"	"													"		
SW-40	58	"	1158	"	"				"		"		"	"	"													"		
SW-41	59	"	1159	"	"				"		"		"	"	"													"		
SW-42	60	"	1200	"	"				"		"		"	"	"													"		
TOTAL																														

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature) Alexa Bledsoe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 4.5 THERM#: CF #2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Page 362 of 904

№ 1814

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/19/2021 PAGE 9 OF 9

PO#: LAB WORK ORDER#: 1J19004

PROJECT LOCATION OR NAME: Mack Pw

LAI PROJECT #: 21-0105-04 COLLECTOR: RW + DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐	HOLDPAH ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D.W. 200.8 ☐	TCLP ☐	RCI ☐	TOX ☐	FLASHPOINT ☐	TDS ☐	TSS ☐	% MOISTURE ☐	pH ☐	HEXAVALENT CHROMIUM ☐	CYANIDE ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDES ☒	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
SW-43	61	10/18/21	1201	S	1				X		X		X	X	X																										X			
SW-44	62		1202																																									
SW-45	63		1203																																									
SW-46	64		1204																																									
SW-47	65		1205																																									
SW-48	66		1206																																									
TOTAL																																											

RELINQUISHED BY:(Signature) DATE/TIME 10/19/21 1001 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 5.5 4.5 THERM#: CF1 12
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW Release

Project Number: 21-0105-04

Location: New Mexico

Lab Order Number: 1K10003

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 11/16/21

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-29	1K10003-01	Soil	11/09/21 09:00	11-10-2021 09:25
B-38	1K10003-02	Soil	11/09/21 09:02	11-10-2021 09:25
SW-1	1K10003-03	Soil	11/09/21 09:04	11-10-2021 09:25
SW-3	1K10003-04	Soil	11/09/21 09:08	11-10-2021 09:25
SW-4	1K10003-05	Soil	11/09/21 09:40	11-10-2021 09:25
SW-9	1K10003-06	Soil	11/09/21 10:45	11-10-2021 09:25
SW-15	1K10003-07	Soil	11/09/21 11:50	11-10-2021 09:25
SW-16	1K10003-08	Soil	11/09/21 11:52	11-10-2021 09:25
SW-17	1K10003-09	Soil	11/09/21 11:54	11-10-2021 09:25
SW-18	1K10003-10	Soil	11/09/21 11:56	11-10-2021 09:25

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-29

1K10003-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:03	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:03	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:03	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:03	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:03	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1K1001*	*11/10/21 09:44*	*11/10/21 21:03*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*106 %*	*80-120*		*P1K1001*	*11/10/21 09:44*	*11/10/21 21:03*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5540**	26.9	mg/kg dry	25	P1K1217	11/12/21 16:50	11/16/21 01:31	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 07:43	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 07:43	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 07:43	TPH 8015M	
Surrogate: 1-Chlorooctane		*84.5 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 07:43*	*TPH 8015M*	
Surrogate: o-Terphenyl		*89.2 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 07:43*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 07:43	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-38

1K10003-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00110	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:25	EPA 8021B	
Toluene	ND	0.00110	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:25	EPA 8021B	
Ethylbenzene	ND	0.00110	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:25	EPA 8021B	
Xylene (p/m)	ND	0.00220	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:25	EPA 8021B	
Xylene (o)	ND	0.00110	mg/kg dry	1	P1K1001	11/10/21 09:44	11/10/21 21:25	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1K1001*	*11/10/21 09:44*	*11/10/21 21:25*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*104 %*	*80-120*		*P1K1001*	*11/10/21 09:44*	*11/10/21 21:25*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**5400**	27.5	mg/kg dry	25	P1K1217	11/12/21 16:50	11/16/21 01:46	EPA 300.0	
% Moisture	**9.0**	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	27.5	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 08:53	TPH 8015M	
>C12-C28	ND	27.5	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 08:53	TPH 8015M	
>C28-C35	ND	27.5	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 08:53	TPH 8015M	
Surrogate: 1-Chlorooctane		*86.7 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 08:53*	*TPH 8015M*	
Surrogate: o-Terphenyl		*91.1 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 08:53*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	27.5	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 08:53	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-1

1K10003-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 16:41	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 16:41	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 16:41	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 16:41	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 16:41	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*105 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 16:41*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 16:41*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**49.3**	1.00	mg/kg dry	1	P1K1217	11/12/21 16:50	11/16/21 02:02	EPA 300.0	
% Moisture	ND	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 09:17	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 09:17	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 09:17	TPH 8015M	
Surrogate: 1-Chlorooctane		*86.8 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 09:17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*88.0 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 09:17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 09:17	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-3

1K10003-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:02	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:02	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:02	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:02	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:02	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*107 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 17:02*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*97.4 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 17:02*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**251**	1.01	mg/kg dry	1	P1K1217	11/12/21 16:50	11/16/21 02:17	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 09:39	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 09:39	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 09:39	TPH 8015M	
Surrogate: 1-Chlorooctane		*86.1 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 09:39*	*TPH 8015M*	
Surrogate: o-Terphenyl		*90.9 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 09:39*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 09:39	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-4

1K10003-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:24	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:24	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:24	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:24	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:24	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 17:24*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*107 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 17:24*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**105**	1.01	mg/kg dry	1	P1K1217	11/12/21 16:50	11/16/21 02:32	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	**25.6**	25.3	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 10:02	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 10:02	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 10:02	TPH 8015M	
Surrogate: 1-Chlorooctane		*84.2 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 10:02*	*TPH 8015M*	
Surrogate: o-Terphenyl		*90.9 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 10:02*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**25.6**	25.3	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 10:02	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-9

1K10003-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:44	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:44	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:44	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:44	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 17:44	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 17:44*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*107 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 17:44*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**456**	1.00	mg/kg dry	1	P1K1217	11/12/21 16:50	11/16/21 02:48	EPA 300.0	
% Moisture	ND	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 10:25	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 10:25	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 10:25	TPH 8015M	
Surrogate: 1-Chlorooctane		*85.3 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 10:25*	*TPH 8015M*	
Surrogate: o-Terphenyl		*89.0 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 10:25*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 10:25	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-15

1K10003-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:05	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:05	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:05	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:05	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:05	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 18:05*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*108 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 18:05*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**163**	1.00	mg/kg dry	1	P1K1217	11/12/21 16:50	11/16/21 03:33	EPA 300.0	
% Moisture	ND	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 11:41	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 11:41	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 11:41	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.6 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 11:41*	*TPH 8015M*	
Surrogate: o-Terphenyl		*87.5 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 11:41*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 11:41	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-16

1K10003-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:26	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:26	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:26	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:26	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:26	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*111 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 18:26*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 18:26*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**414**	1.00	mg/kg dry	1	P1K1217	11/12/21 16:50	11/16/21 04:19	EPA 300.0	
% Moisture	ND	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:04	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:04	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:04	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.7 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 12:04*	*TPH 8015M*	
Surrogate: o-Terphenyl		*91.6 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 12:04*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 12:04	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-17

1K10003-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:47	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:47	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:47	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:47	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 18:47	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*104 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 18:47*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 18:47*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**850**	1.04	mg/kg dry	1	P1K1107	11/11/21 14:00	11/11/21 17:01	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:27	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:27	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:27	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.8 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 12:27*	*TPH 8015M*	
Surrogate: o-Terphenyl		*95.9 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 12:27*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 12:27	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-18

1K10003-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 19:09	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 19:09	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 19:09	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 19:09	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1K1105	11/11/21 13:52	11/11/21 19:09	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*108 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 19:09*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*110 %*	*80-120*		*P1K1105*	*11/11/21 13:52*	*11/11/21 19:09*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**434**	1.02	mg/kg dry	1	P1K1107	11/11/21 14:00	11/11/21 17:58	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1K1101	11/11/21 09:20	11/11/21 09:23	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:49	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:49	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1K1102	11/11/21 09:30	11/12/21 12:49	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.9 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 12:49*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.2 %*	*70-130*		*P1K1102*	*11/11/21 09:30*	*11/12/21 12:49*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	11/11/21 09:30	11/12/21 12:49	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1001 - * DEFAULT PREP *** **										
Blank (P1K1001-BLK1)				Prepared & Analyzed: 11/10/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.123*		"	*0.121*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.115*		"	*0.121*		*95.4*	*80-120*			
LCS (P1K1001-BS1)				Prepared & Analyzed: 11/10/21						
Benzene	0.102	0.00100	mg/kg wet	0.0969		105	70-130			
Toluene	0.111	0.00100	"	0.0969		114	70-130			
Ethylbenzene	0.113	0.00100	"	0.0969		116	70-130			
Xylene (p/m)	0.232	0.00200	"	0.194		120	70-130			
Xylene (o)	0.112	0.00100	"	0.0969		116	70-130			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.116*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.118*		"	*0.116*		*101*	*80-120*			
LCS Dup (P1K1001-BSD1)				Prepared & Analyzed: 11/10/21						
Benzene	0.104	0.00100	mg/kg wet	0.101		103	70-130	2.29	20	
Toluene	0.111	0.00100	"	0.101		110	70-130	3.58	20	
Ethylbenzene	0.109	0.00100	"	0.101		109	70-130	6.83	20	
Xylene (p/m)	0.235	0.00200	"	0.201		117	70-130	2.60	20	
Xylene (o)	0.114	0.00100	"	0.101		113	70-130	2.53	20	
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.121*		*106*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.128*		"	*0.121*		*106*	*80-120*			
Calibration Blank (P1K1001-CCB1)				Prepared & Analyzed: 11/10/21						
Benzene	0.00		mg/kg wet							
Toluene	0.240		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.115*		"	*0.120*		*96.0*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.125*		"	*0.120*		*104*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1001 - * DEFAULT PREP *** **										
Calibration Blank (P1K1001-CCB2)				Prepared & Analyzed: 11/10/21						
Benzene	0.00		mg/kg wet							
Toluene	0.230		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.160		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.120*		*"*	*0.120*		*99.7*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.120*		*104*	*80-120*			
Calibration Blank (P1K1001-CCB3)				Prepared & Analyzed: 11/10/21						
Benzene	0.00		mg/kg wet							
Toluene	0.290		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.380		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.123*		*"*	*0.120*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.127*		*"*	*0.120*		*106*	*80-120*			
Calibration Check (P1K1001-CCV1)				Prepared & Analyzed: 11/10/21						
Benzene	0.110	0.00100	mg/kg wet	0.100		110	80-120			
Toluene	0.116	0.00100	"	0.100		116	80-120			
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120			
Xylene (p/m)	0.240	0.00200	"	0.200		120	80-120			
Xylene (o)	0.116	0.00100	"	0.100		116	80-120			
Surrogate: 4-Bromofluorobenzene	*0.116*		*"*	*0.120*		*96.3*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.7*	*75-125*			
Calibration Check (P1K1001-CCV2)				Prepared & Analyzed: 11/10/21						
Benzene	0.108	0.00100	mg/kg wet	0.100		108	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.113	0.00100	"	0.100		113	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		120	80-120			
Xylene (o)	0.120	0.00100	"	0.100		120	80-120			
Surrogate: 1,4-Difluorobenzene	*0.124*		*"*	*0.120*		*104*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.127*		*"*	*0.120*		*106*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1001 - * DEFAULT PREP *** **										
Calibration Check (P1K1001-CCV3)				Prepared & Analyzed: 11/10/21						
Benzene	0.0968	0.00100	mg/kg wet	0.100		96.8	80-120			
Toluene	0.106	0.00100	"	0.100		106	80-120			
Ethylbenzene	0.114	0.00100	"	0.100		114	80-120			
Xylene (p/m)	0.233	0.00200	"	0.200		117	80-120			
Xylene (o)	0.110	0.00100	"	0.100		110	80-120			
Surrogate: 1,4-Difluorobenzene	*0.127*		*"*	*0.120*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.126*		*"*	*0.120*		*105*	*75-125*			
Matrix Spike (P1K1001-MS1)		**Source: 1K10001-01**		Prepared & Analyzed: 11/10/21						
Benzene	0.0781	0.00103	mg/kg dry	0.103	ND	75.7	80-120			QM-07
Toluene	0.0929	0.00103	"	0.103	0.0163	74.3	80-120			QM-07
Ethylbenzene	0.131	0.00103	"	0.103	0.0460	82.7	80-120			
Xylene (p/m)	0.417	0.00206	"	0.206	0.187	112	80-120			
Xylene (o)	0.177	0.00103	"	0.103	0.0799	93.9	80-120			
Surrogate: 1,4-Difluorobenzene	*0.146*		*"*	*0.124*		*118*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.123*		*"*	*0.124*		*99.4*	*80-120*			
Matrix Spike Dup (P1K1001-MSD1)		**Source: 1K10001-01**		Prepared & Analyzed: 11/10/21						
Benzene	0.0836	0.00103	mg/kg dry	0.103	ND	81.1	80-120	6.86	20	
Toluene	0.0866	0.00103	"	0.103	0.0163	68.2	80-120	8.52	20	QM-07
Ethylbenzene	0.0998	0.00103	"	0.103	0.0460	52.2	80-120	45.1	20	QM-07
Xylene (p/m)	0.297	0.00206	"	0.206	0.187	53.5	80-120	70.5	20	QM-07
Xylene (o)	0.128	0.00103	"	0.103	0.0799	46.8	80-120	67.1	20	QM-07
Surrogate: 4-Bromofluorobenzene	*0.171*		*"*	*0.124*		*138*	*80-120*			*S-GC*
Surrogate: 1,4-Difluorobenzene	*0.148*		*"*	*0.124*		*119*	*80-120*			
Batch P1K1105 - * DEFAULT PREP *** **										
Blank (P1K1105-BLK1)				Prepared & Analyzed: 11/11/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.118*		*"*	*0.120*		*97.9*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.124*		*"*	*0.120*		*103*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1105 - * DEFAULT PREP *** **										
LCS (P1K1105-BS1)				Prepared & Analyzed: 11/11/21						
Benzene	0.0908	0.00100	mg/kg wet	0.0969		93.8	70-130			
Toluene	0.107	0.00100	"	0.0969		110	70-130			
Ethylbenzene	0.116	0.00100	"	0.0969		120	70-130			
Xylene (p/m)	0.232	0.00200	"	0.194		120	70-130			
Xylene (o)	0.115	0.00100	"	0.0969		118	70-130			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.116*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.117*		*"*	*0.116*		*101*	*80-120*			
LCS Dup (P1K1105-BSD1)				Prepared & Analyzed: 11/11/21						
Benzene	0.0933	0.00100	mg/kg wet	0.0982		95.0	70-130	1.36	20	
Toluene	0.110	0.00100	"	0.0982		112	70-130	1.72	20	
Ethylbenzene	0.115	0.00100	"	0.0982		117	70-130	2.31	20	
Xylene (p/m)	0.233	0.00200	"	0.196		119	70-130	0.763	20	
Xylene (o)	0.116	0.00100	"	0.0982		118	70-130	0.322	20	
Surrogate: 1,4-Difluorobenzene	*0.123*		*"*	*0.118*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.119*		*"*	*0.118*		*101*	*80-120*			
Calibration Blank (P1K1105-CCB1)				Prepared & Analyzed: 11/11/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.00		"							
Xylene (o)	0.00		"							
Surrogate: 4-Bromofluorobenzene	*0.130*		*"*	*0.120*		*108*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.132*		*"*	*0.120*		*110*	*80-120*			
Calibration Blank (P1K1105-CCB2)				Prepared & Analyzed: 11/11/21						
Benzene	0.00		mg/kg wet							
Toluene	0.340		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.320		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.126*		*"*	*0.120*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.122*		*"*	*0.120*		*102*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1105 - * DEFAULT PREP *** **										
Calibration Blank (P1K1105-CCB3)				Prepared & Analyzed: 11/11/21						
Benzene	0.00		mg/kg wet							
Toluene	0.300		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.230		"							
Xylene (o)	0.130		"							
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.120*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.121*		*"*	*0.120*		*101*	*80-120*			
Calibration Check (P1K1105-CCV1)				Prepared & Analyzed: 11/11/21						
Benzene	0.102	0.00100	mg/kg wet	0.100		102	80-120			
Toluene	0.103	0.00100	"	0.100		103	80-120			
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120			
Xylene (p/m)	0.231	0.00200	"	0.200		115	80-120			
Xylene (o)	0.102	0.00100	"	0.100		102	80-120			
Surrogate: 4-Bromofluorobenzene	*0.119*		*"*	*0.120*		*99.0*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.123*		*"*	*0.120*		*102*	*75-125*			
Calibration Check (P1K1105-CCV2)				Prepared & Analyzed: 11/11/21						
Benzene	0.117	0.00100	mg/kg wet	0.100		117	80-120			
Toluene	0.115	0.00100	"	0.100		115	80-120			
Ethylbenzene	0.114	0.00100	"	0.100		114	80-120			
Xylene (p/m)	0.240	0.00200	"	0.200		120	80-120			
Xylene (o)	0.117	0.00100	"	0.100		117	80-120			
Surrogate: 4-Bromofluorobenzene	*0.132*		*"*	*0.120*		*110*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.133*		*"*	*0.120*		*111*	*75-125*			
Calibration Check (P1K1105-CCV3)				Prepared & Analyzed: 11/11/21						
Benzene	0.116	0.00100	mg/kg wet	0.100		116	80-120			
Toluene	0.117	0.00100	"	0.100		117	80-120			
Ethylbenzene	0.115	0.00100	"	0.100		115	80-120			
Xylene (p/m)	0.238	0.00200	"	0.200		119	80-120			
Xylene (o)	0.118	0.00100	"	0.100		118	80-120			
Surrogate: 4-Bromofluorobenzene	*0.127*		*"*	*0.120*		*106*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.127*		*"*	*0.120*		*106*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1105 - * DEFAULT PREP *** **										
Matrix Spike (P1K1105-MS1)	**Source: 1K10003-03**			Prepared & Analyzed: 11/11/21						
Benzene	0.107	0.00100	mg/kg dry	0.0996	ND	107	80-120			
Toluene	0.108	0.00100	"	0.0996	ND	108	80-120			
Ethylbenzene	0.105	0.00100	"	0.0996	ND	105	80-120			
Xylene (p/m)	0.213	0.00200	"	0.199	ND	107	80-120			
Xylene (o)	0.0951	0.00100	"	0.0996	ND	95.5	80-120			
Surrogate: 1,4-Difluorobenzene	*0.134*		*"*	*0.120*		*112*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.138*		*"*	*0.120*		*116*	*80-120*			
Matrix Spike Dup (P1K1105-MSD1)	**Source: 1K10003-03**			Prepared & Analyzed: 11/11/21						
Benzene	0.0950	0.00100	mg/kg dry	0.100	ND	95.0	80-120	12.2	20	
Toluene	0.0938	0.00100	"	0.100	ND	93.8	80-120	14.3	20	
Ethylbenzene	0.0912	0.00100	"	0.100	ND	91.2	80-120	14.2	20	
Xylene (p/m)	0.184	0.00200	"	0.200	ND	92.1	80-120	14.7	20	
Xylene (o)	0.0813	0.00100	"	0.100	ND	81.3	80-120	16.0	20	
Surrogate: 4-Bromofluorobenzene	*0.125*		*"*	*0.120*		*104*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.120*		*105*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1101 - * DEFAULT PREP *** **										
Blank (P1K1101-BLK1)				Prepared & Analyzed: 11/11/21						
% Moisture	ND	0.1	%							
Blank (P1K1101-BLK2)				Prepared & Analyzed: 11/11/21						
% Moisture	ND	0.1	%							
Duplicate (P1K1101-DUP1)		**Source: 1K10003-06**		Prepared & Analyzed: 11/11/21						
% Moisture	ND	0.1	%		ND				20	
Duplicate (P1K1101-DUP2)		**Source: 1K10006-02**		Prepared & Analyzed: 11/11/21						
% Moisture	1.0	0.1	%		2.0			66.7	20	R3
Batch P1K1107 - * DEFAULT PREP *** **										
Blank (P1K1107-BLK1)				Prepared & Analyzed: 11/11/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1K1107-BS1)				Prepared & Analyzed: 11/11/21						
Chloride	43.5		mg/kg	40.0		109	90-110			
LCS Dup (P1K1107-BSD1)				Prepared & Analyzed: 11/11/21						
Chloride	43.3		mg/kg	40.0		108	90-110	0.504	10	
Calibration Check (P1K1107-CCV1)				Prepared & Analyzed: 11/11/21						
Chloride	21.0		mg/kg	20.0		105	90-110			
Calibration Check (P1K1107-CCV2)				Prepared & Analyzed: 11/11/21						
Chloride	20.3		mg/kg	20.0		101	90-110			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1107 - * DEFAULT PREP *** **										
Calibration Check (P1K1107-CCV3)				Prepared: 11/11/21 Analyzed: 11/12/21						
Chloride	20.3		mg/kg	20.0		102	90-110			
Matrix Spike (P1K1107-MS1)		Source: 1K10003-09		Prepared & Analyzed: 11/11/21						
Chloride	861	1.04	mg/kg dry	521	850	2.04	80-120			QM-05
Matrix Spike (P1K1107-MS2)		Source: 1K11003-05		Prepared & Analyzed: 11/11/21						
Chloride	17100	57.5	mg/kg dry	5750	11500	96.5	80-120			
Matrix Spike Dup (P1K1107-MSD1)		Source: 1K10003-09		Prepared & Analyzed: 11/11/21						
Chloride	809	1.04	mg/kg dry	521	850	NR	80-120	6.23	20	QM-05
Matrix Spike Dup (P1K1107-MSD2)		Source: 1K11003-05		Prepared & Analyzed: 11/11/21						
Chloride	17100	57.5	mg/kg dry	5750	11500	97.1	80-120	0.209	20	
Batch P1K1217 - * DEFAULT PREP *** **										
Blank (P1K1217-BLK1)				Prepared: 11/12/21 Analyzed: 11/15/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1K1217-BS1)				Prepared: 11/12/21 Analyzed: 11/15/21						
Chloride	38.8		mg/kg	40.0		96.9	90-110			
LCS Dup (P1K1217-BSD1)				Prepared: 11/12/21 Analyzed: 11/15/21						
Chloride	37.3		mg/kg	40.0		93.3	90-110	3.73	10	
Calibration Blank (P1K1217-CCB1)				Prepared: 11/12/21 Analyzed: 11/15/21						
Chloride	0.00		mg/kg wet							

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1217 - * DEFAULT PREP *** **										
Calibration Blank (P1K1217-CCB2)				Prepared: 11/12/21 Analyzed: 11/16/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1K1217-CCV1)				Prepared: 11/12/21 Analyzed: 11/15/21						
Chloride	19.3		mg/kg	20.0		96.5	90-110			
Calibration Check (P1K1217-CCV2)				Prepared: 11/12/21 Analyzed: 11/16/21						
Chloride	19.2		mg/kg	20.0		96.2	90-110			
Calibration Check (P1K1217-CCV3)				Prepared: 11/12/21 Analyzed: 11/16/21						
Chloride	18.3		mg/kg	20.0		91.7	90-110			
Matrix Spike (P1K1217-MS1)		**Source: 1K09003-27**		Prepared: 11/12/21 Analyzed: 11/16/21						
Chloride	497	1.06	mg/kg dry	532	6.05	92.3	80-120			
Matrix Spike (P1K1217-MS2)		**Source: 1K10003-07**		Prepared: 11/12/21 Analyzed: 11/16/21						
Chloride	671	1.00	mg/kg dry	500	163	102	80-120			
Matrix Spike Dup (P1K1217-MSD1)		**Source: 1K09003-27**		Prepared: 11/12/21 Analyzed: 11/16/21						
Chloride	479	1.06	mg/kg dry	532	6.05	88.9	80-120	3.67	20	
Matrix Spike Dup (P1K1217-MSD2)		**Source: 1K10003-07**		Prepared: 11/12/21 Analyzed: 11/16/21						
Chloride	628	1.00	mg/kg dry	500	163	93.1	80-120	6.56	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1102 - TX 1005										
Blank (P1K1102-BLK1)				Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*75.1*		*"*	*100*		*75.1*	*70-130*			
Surrogate: o-Terphenyl	*38.9*		*"*	*50.0*		*77.8*	*70-130*			
LCS (P1K1102-BS1)				Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	1020	25.0	mg/kg wet	1000		102	75-125			
>C12-C28	913	25.0	"	1000		91.3	75-125			
Surrogate: 1-Chlorooctane	*121*		*"*	*100*		*121*	*70-130*			
Surrogate: o-Terphenyl	*47.3*		*"*	*50.0*		*94.5*	*70-130*			
LCS Dup (P1K1102-BSD1)				Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	1030	25.0	mg/kg wet	1000		103	75-125	0.640	20	
>C12-C28	920	25.0	"	1000		92.0	75-125	0.788	20	
Surrogate: 1-Chlorooctane	*121*		*"*	*100*		*121*	*70-130*			
Surrogate: o-Terphenyl	*45.8*		*"*	*50.0*		*91.7*	*70-130*			
Calibration Check (P1K1102-CCV1)				Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	521	25.0	mg/kg wet	500		104	85-115			
>C12-C28	462	25.0	"	500		92.5	85-115			
Surrogate: 1-Chlorooctane	*101*		*"*	*100*		*101*	*70-130*			
Surrogate: o-Terphenyl	*44.5*		*"*	*50.0*		*89.1*	*70-130*			
Calibration Check (P1K1102-CCV2)				Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	529	25.0	mg/kg wet	500		106	85-115			
>C12-C28	486	25.0	"	500		97.2	85-115			
Surrogate: 1-Chlorooctane	*105*		*"*	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*45.8*		*"*	*50.0*		*91.7*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1102 - TX 1005										
Calibration Check (P1K1102-CCV3)				Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	556	25.0	mg/kg wet	500		111	85-115			
>C12-C28	511	25.0	"	500		102	85-115			
Surrogate: 1-Chlorooctane	*110*		*"*	*100*		*110*	*70-130*			
Surrogate: o-Terphenyl	*49.2*		*"*	*50.0*		*98.4*	*70-130*			
Matrix Spike (P1K1102-MS1)		**Source: 1K10003-10**		Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	1010	25.5	mg/kg dry	1020	19.4	96.9	75-125			
>C12-C28	921	25.5	"	1020	11.2	89.1	75-125			
Surrogate: 1-Chlorooctane	*118*		*"*	*102*		*116*	*70-130*			
Surrogate: o-Terphenyl	*44.5*		*"*	*51.0*		*87.1*	*70-130*			
Matrix Spike Dup (P1K1102-MSD1)		**Source: 1K10003-10**		Prepared: 11/11/21 Analyzed: 11/12/21						
C6-C12	1010	25.5	mg/kg dry	1020	19.4	97.3	75-125	0.381	20	
>C12-C28	929	25.5	"	1020	11.2	90.0	75-125	0.906	20	
Surrogate: 1-Chlorooctane	*118*		*"*	*102*		*116*	*70-130*			
Surrogate: o-Terphenyl	*40.2*		*"*	*51.0*		*78.8*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
ROI	Received on Ice
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
NPBEL C(	Chain of Custody was not generated at PBELAB
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 11/16/2021

Brent Barron, Laboratory Director/Technical Director

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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If you have received this material in error, please notify us immediately at 432-686-7235.

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CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 11/10/2021 PAGE 1 OF 1
PO#: LAB WORK ORDER#: 1K-10003
PROJECT LOCATION OR NAME: Mack PW Release
LAI PROJECT #: 21-0105-04 COLLECTOR: MB

TRRP report? ☐ Yes ☒ No
TIME ZONE: Time zone/State: MST/NM
S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐	TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐	HOLDPAH ☐	8081 PESTICIDES ☐	8082 PCBS ☐	8151 HERBICIDES ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D.W. 200.8 ☐	TCLP ☐	RCI ☐	TOX ☐	FLASHPOINT ☐	TDS ☐	TSS ☐	% MOISTURE ☐	pH ☐	HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐	CYANIDE ☐	CHLORIDES ☐	PECHLORATE ☐	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
B-29	1	11/9/21	0900	S	1				X		X		X		X	X	X																													
B-38	2	"	0902	"	"				"		"		"		"	"	"																													
SW-1	3	"	0904	"	"				"		"		"		"	"	"																													
SW-3	4	"	0908	"	"				"		"		"		"	"	"																													
SW-4	5	"	0940	"	"				"		"		"		"	"	"																													
SW-9	6	"	1045	"	"				"		"		"		"	"	"																													
SW-15	7	"	1150	"	"				"		"		"		"	"	"																													
SW-16	8	"	1152	"	"				"		"		"		"	"	"																													
SW-17	9	"	1154	"	"				"		"		"		"	"	"																													
SW-18	10	"	1156	"	"				"		"		"		"	"	"																													

TOTAL 10

RELINQUISHED BY:(Signature) DATE/TIME 11/10/21 0925 RECEIVED BY:(Signature) Tyra Blasse
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)
LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 4.4 5.4 CF+1 THERM#: 12
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM
Released to Imaging: 6/17/2022 2:48:59 PM

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PBELAB

OOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

Sample Receipt Checklist

Yes		Notes
✓	Chain of custody present?	
✓	Chain of custody signed/dated/time when relinquished and received?	
✓	Sample date/time present on COC for all samples?	
✓	Samplers name present on COC?	
✓	Chain of custody agrees with sample labels?	
✓	Sample containers intact?	
X	Custody seals intact on sample bottles?	
✓	Samples in proper container/bottle?	
✓	Sufficient sample volume for indicated test?	
✓	All samples received within holding time?	
✓	Samples received within appropriate temp?	5.4
✓	Analysis requested for all samples submitted?	
✓	Shipping container/cooler in good condition?	
	Custody seals intact on shipping container/cooler?	

Login Notes:
2oz Jar 1K10003

PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

SAMPLE VARIANCE/NON-CONFORMANCE

Variance/Discrepancy:

Resolution:

Client Contacted

Name:

Date/Time:

NC Initiated by:_____ Approved by:_____

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW Release

Project Number: 21-0105-04

Location: New Mexico

Lab Order Number: 1K12004

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 11/17/21

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-40	1K12004-01	Soil	11/09/21 12:44	11-12-2021 09:13
SW-46	1K12004-02	Soil	11/10/21 09:32	11-12-2021 09:13
SW-47	1K12004-03	Soil	11/10/21 09:34	11-12-2021 09:13
SW-48	1K12004-04	Soil	11/10/21 09:36	11-12-2021 09:13
SW-19	1K12004-05	Soil	11/10/21 10:28	11-12-2021 09:13
SW-21	1K12004-06	Soil	11/10/21 10:32	11-12-2021 09:13
SW-37	1K12004-07	Soil	11/10/21 11:00	11-12-2021 09:13

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-40

1K12004-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:20	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:20	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:20	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:20	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:20	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 20:20*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*105 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 20:20*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**271**	1.02	mg/kg dry	1	P1K1603	11/16/21 10:48	11/16/21 17:56	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1K1503	11/15/21 11:04	11/15/21 11:14	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 02:17	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 02:17	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 02:17	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.7 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 02:17*	*TPH 8015M*	
Surrogate: o-Terphenyl		*96.8 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 02:17*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	11/12/21 14:43	11/13/21 02:17	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-46

1K12004-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:41	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:41	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:41	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:41	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 20:41	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 20:41*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*105 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 20:41*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**480**	1.02	mg/kg dry	1	P1K1603	11/16/21 10:48	11/16/21 18:15	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1K1503	11/15/21 11:04	11/15/21 11:14	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 02:40	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 02:40	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 02:40	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.6 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 02:40*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.8 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 02:40*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	11/12/21 14:43	11/13/21 02:40	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-47

1K12004-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:02	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:02	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:02	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:02	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:02	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 21:02*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 21:02*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**254**	1.01	mg/kg dry	1	P1K1603	11/16/21 10:48	11/16/21 18:34	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1503	11/15/21 11:04	11/15/21 11:14	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:03	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:03	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:03	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.6 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 03:03*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 03:03*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	11/12/21 14:43	11/13/21 03:03	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-48

1K12004-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:23	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:23	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:23	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:23	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:23	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.8 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 21:23*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 21:23*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**8.52**	1.00	mg/kg dry	1	P1K1603	11/16/21 10:48	11/16/21 18:53	EPA 300.0	
% Moisture	ND	0.1	%	1	P1K1503	11/15/21 11:04	11/15/21 11:14	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:26	TPH 8015M	
>C12-C28	**29.6**	25.0	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:26	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:26	TPH 8015M	
Surrogate: 1-Chlorooctane		*90.5 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 03:26*	*TPH 8015M*	
Surrogate: o-Terphenyl		*95.1 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 03:26*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	**29.6**	25.0	mg/kg dry	1	[CALC]	11/12/21 14:43	11/13/21 03:26	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-19

1K12004-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:44	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:44	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:44	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:44	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 21:44	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 21:44*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 21:44*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**1320**	5.15	mg/kg dry	5	P1K1603	11/16/21 10:48	11/16/21 19:12	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1K1503	11/15/21 11:04	11/15/21 11:14	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:48	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:48	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 03:48	TPH 8015M	
Surrogate: 1-Chlorooctane		*84.0 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 03:48*	*TPH 8015M*	
Surrogate: o-Terphenyl		*88.8 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 03:48*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	11/12/21 14:43	11/13/21 03:48	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-21

1K12004-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 22:47	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 22:47	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 22:47	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 22:47	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 22:47	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 22:47*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*101 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 22:47*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**7.47**	1.01	mg/kg dry	1	P1K1603	11/16/21 10:48	11/16/21 19:31	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1503	11/15/21 11:04	11/15/21 11:14	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 04:11	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 04:11	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 04:11	TPH 8015M	
Surrogate: 1-Chlorooctane		*98.7 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 04:11*	*TPH 8015M*	
Surrogate: o-Terphenyl		*104 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 04:11*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	11/12/21 14:43	11/13/21 04:11	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

SW-37

1K12004-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 23:09	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 23:09	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 23:09	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 23:09	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1602	11/16/21 10:11	11/16/21 23:09	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.4 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 23:09*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*		*P1K1602*	*11/16/21 10:11*	*11/16/21 23:09*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**303**	1.01	mg/kg dry	1	P1K1603	11/16/21 10:48	11/16/21 19:50	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1503	11/15/21 11:04	11/15/21 11:14	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 04:34	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 04:34	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1210	11/12/21 14:43	11/13/21 04:34	TPH 8015M	
Surrogate: 1-Chlorooctane		*96.6 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 04:34*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1K1210*	*11/12/21 14:43*	*11/13/21 04:34*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	11/12/21 14:43	11/13/21 04:34	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1602 - * DEFAULT PREP *** **										
Blank (P1K1602-BLK1)				Prepared & Analyzed: 11/16/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 4-Bromofluorobenzene	*0.117*		"	*0.120*		*97.8*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.0*	*80-120*			
LCS (P1K1602-BS1)				Prepared & Analyzed: 11/16/21						
Benzene	0.117	0.00100	mg/kg wet	0.100		117	70-130			
Toluene	0.113	0.00100	"	0.100		113	70-130			
Ethylbenzene	0.119	0.00100	"	0.100		119	70-130			
Xylene (p/m)	0.239	0.00200	"	0.200		120	70-130			
Xylene (o)	0.109	0.00100	"	0.100		109	70-130			
Surrogate: 4-Bromofluorobenzene	*0.121*		"	*0.120*		*101*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*99.9*	*80-120*			
LCS Dup (P1K1602-BSD1)				Prepared & Analyzed: 11/16/21						
Benzene	0.106	0.00100	mg/kg wet	0.100		106	70-130	9.46	20	
Toluene	0.101	0.00100	"	0.100		101	70-130	11.3	20	
Ethylbenzene	0.107	0.00100	"	0.100		107	70-130	10.5	20	
Xylene (p/m)	0.219	0.00200	"	0.200		110	70-130	8.63	20	
Xylene (o)	0.0984	0.00100	"	0.100		98.4	70-130	10.6	20	
Surrogate: 4-Bromofluorobenzene	*0.120*		"	*0.120*		*100*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.4*	*80-120*			
Calibration Blank (P1K1602-CCB1)				Prepared & Analyzed: 11/16/21						
Benzene	0.00		mg/kg wet							
Toluene	0.350		"							
Ethylbenzene	0.300		"							
Xylene (p/m)	0.680		"							
Xylene (o)	0.380		"							
Surrogate: 4-Bromofluorobenzene	*0.119*		"	*0.120*		*98.8*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.5*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1602 - * DEFAULT PREP *** **										
Calibration Blank (P1K1602-CCB2)				Prepared & Analyzed: 11/16/21						
Benzene	0.00		mg/kg wet							
Toluene	0.250		"							
Ethylbenzene	0.170		"							
Xylene (p/m)	0.410		"							
Xylene (o)	0.00		"							
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*99.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.123*		"	*0.120*		*102*	*80-120*			
Calibration Blank (P1K1602-CCB3)				Prepared: 11/16/21 Analyzed: 11/17/21						
Benzene	0.00		mg/kg wet							
Toluene	0.00		"							
Ethylbenzene	0.180		"							
Xylene (p/m)	0.520		"							
Xylene (o)	0.350		"							
Surrogate: 4-Bromofluorobenzene	*0.126*		"	*0.120*		*105*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.120*		"	*0.120*		*100*	*80-120*			
Calibration Check (P1K1602-CCV1)				Prepared & Analyzed: 11/16/21						
Benzene	0.100	0.00100	mg/kg wet	0.100		100	80-120			
Toluene	0.0968	0.00100	"	0.100		96.8	80-120			
Ethylbenzene	0.0958	0.00100	"	0.100		95.8	80-120			
Xylene (p/m)	0.213	0.00200	"	0.200		106	80-120			
Xylene (o)	0.0939	0.00100	"	0.100		93.9	80-120			
Surrogate: 4-Bromofluorobenzene	*0.117*		"	*0.120*		*97.4*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.118*		"	*0.120*		*98.0*	*75-125*			
Calibration Check (P1K1602-CCV2)				Prepared & Analyzed: 11/16/21						
Benzene	0.119	0.00100	mg/kg wet	0.100		119	80-120			
Toluene	0.115	0.00100	"	0.100		115	80-120			
Ethylbenzene	0.110	0.00100	"	0.100		110	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		120	80-120			
Xylene (o)	0.111	0.00100	"	0.100		111	80-120			
Surrogate: 4-Bromofluorobenzene	*0.131*		"	*0.120*		*109*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.125*		"	*0.120*		*104*	*75-125*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1602 - * DEFAULT PREP *** **										
Calibration Check (P1K1602-CCV3)				Prepared: 11/16/21 Analyzed: 11/17/21						
Benzene	0.114	0.00100	mg/kg wet	0.100		114	80-120			
Toluene	0.109	0.00100	"	0.100		109	80-120			
Ethylbenzene	0.105	0.00100	"	0.100		105	80-120			
Xylene (p/m)	0.229	0.00200	"	0.200		115	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 4-Bromofluorobenzene	*0.125*		*"*	*0.120*		*105*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.122*		*"*	*0.120*		*101*	*75-125*			
Matrix Spike (P1K1602-MS1)		**Source: 1K16003-01**		Prepared & Analyzed: 11/16/21						
Benzene	0.0727	0.00101	mg/kg dry	0.101	ND	72.0	80-120			QM-07
Toluene	0.0521	0.00101	"	0.101	ND	51.6	80-120			QM-07
Ethylbenzene	0.0416	0.00101	"	0.101	ND	41.2	80-120			QM-07
Xylene (p/m)	0.0819	0.00202	"	0.202	0.00397	38.6	80-120			QM-07
Xylene (o)	0.0359	0.00101	"	0.101	ND	35.6	80-120			QM-07
Surrogate: 4-Bromofluorobenzene	*0.115*		*"*	*0.121*		*95.0*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.125*		*"*	*0.121*		*103*	*80-120*			
Matrix Spike Dup (P1K1602-MSD1)		**Source: 1K16003-01**		Prepared & Analyzed: 11/16/21						
Benzene	0.0737	0.00101	mg/kg dry	0.101	ND	73.0	80-120	1.38	20	QM-07
Toluene	0.0525	0.00101	"	0.101	ND	52.0	80-120	0.734	20	QM-07
Ethylbenzene	0.0407	0.00101	"	0.101	ND	40.3	80-120	2.33	20	QM-07
Xylene (p/m)	0.0802	0.00202	"	0.202	0.00397	37.7	80-120	2.24	20	QM-07
Xylene (o)	0.0345	0.00101	"	0.101	ND	34.2	80-120	3.90	20	QM-07
Surrogate: 4-Bromofluorobenzene	*0.115*		*"*	*0.121*		*94.6*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.126*		*"*	*0.121*		*104*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1503 - * DEFAULT PREP *** **										
Blank (P1K1503-BLK1)				Prepared & Analyzed: 11/15/21						
% Moisture	ND	0.1	%							
Blank (P1K1503-BLK2)				Prepared & Analyzed: 11/15/21						
% Moisture	ND	0.1	%							
Duplicate (P1K1503-DUP1)		**Source: 1K11009-10**		Prepared & Analyzed: 11/15/21						
% Moisture	7.0	0.1	%		7.0			0.00	20	
Duplicate (P1K1503-DUP2)		**Source: 1K11009-20**		Prepared & Analyzed: 11/15/21						
% Moisture	10.0	0.1	%		11.0			9.52	20	
Duplicate (P1K1503-DUP3)		**Source: 1K12003-07**		Prepared & Analyzed: 11/15/21						
% Moisture	1.0	0.1	%		1.0			0.00	20	
Duplicate (P1K1503-DUP4)		**Source: 1K12003-17**		Prepared & Analyzed: 11/15/21						
% Moisture	2.0	0.1	%		2.0			0.00	20	
Duplicate (P1K1503-DUP5)		**Source: 1K12003-32**		Prepared & Analyzed: 11/15/21						
% Moisture	6.0	0.1	%		7.0			15.4	20	
Duplicate (P1K1503-DUP6)		**Source: 1K12003-42**		Prepared & Analyzed: 11/15/21						
% Moisture	7.0	0.1	%		6.0			15.4	20	
Duplicate (P1K1503-DUP7)		**Source: 1K12005-02**		Prepared & Analyzed: 11/15/21						
% Moisture	10.0	0.1	%		9.0			10.5	20	
Duplicate (P1K1503-DUP8)		**Source: 1K12006-09**		Prepared & Analyzed: 11/15/21						
% Moisture	11.0	0.1	%		13.0			16.7	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1603 - * DEFAULT PREP *** **										
Blank (P1K1603-BLK1)				Prepared & Analyzed: 11/16/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1K1603-BS1)				Prepared & Analyzed: 11/16/21						
Chloride	41.3		mg/kg	40.0		103	90-110			
LCS Dup (P1K1603-BSD1)				Prepared & Analyzed: 11/16/21						
Chloride	41.3		mg/kg	40.0		103	90-110	0.0653	10	
Calibration Blank (P1K1603-CCB1)				Prepared & Analyzed: 11/16/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1K1603-CCB2)				Prepared & Analyzed: 11/16/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1K1603-CCV1)				Prepared & Analyzed: 11/16/21						
Chloride	20.4		mg/kg	20.0		102	90-110			
Calibration Check (P1K1603-CCV2)				Prepared & Analyzed: 11/16/21						
Chloride	20.6		mg/kg	20.0		103	90-110			
Calibration Check (P1K1603-CCV3)				Prepared & Analyzed: 11/16/21						
Chloride	20.6		mg/kg	20.0		103	90-110			
Matrix Spike (P1K1603-MS1)		**Source: 1K15010-03**		Prepared & Analyzed: 11/16/21						
Chloride	1290	10.0	mg/kg wet	500	851	87.4	80-120			
Matrix Spike (P1K1603-MS2)		**Source: 1K11004-24**		Prepared & Analyzed: 11/16/21						
Chloride	290	1.12	mg/kg dry	281	9.75	99.6	80-120			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1603 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1K1603-MSD1)	**Source: 1K15010-03**			Prepared & Analyzed: 11/16/21						
Chloride	1310	10.0	mg/kg wet	500	851	92.1	80-120	1.81	20	
Matrix Spike Dup (P1K1603-MSD2)	**Source: 1K11004-24**			Prepared & Analyzed: 11/16/21						
Chloride	277	1.12	mg/kg dry	281	9.75	95.0	80-120	4.64	20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1210 - TX 1005										
Blank (P1K1210-BLK1)				Prepared & Analyzed: 11/12/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*88.0*		*"*	*100*		*88.0*	*70-130*			
Surrogate: o-Terphenyl	*47.1*		*"*	*50.0*		*94.3*	*70-130*			
LCS (P1K1210-BS1)				Prepared & Analyzed: 11/12/21						
C6-C12	1010	25.0	mg/kg wet	1000		101	75-125			
>C12-C28	1010	25.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	*97.0*		*"*	*100*		*97.0*	*70-130*			
Surrogate: o-Terphenyl	*53.5*		*"*	*50.0*		*107*	*70-130*			
LCS Dup (P1K1210-BSD1)				Prepared & Analyzed: 11/12/21						
C6-C12	1010	25.0	mg/kg wet	1000		101	75-125	0.396	20	
>C12-C28	1010	25.0	"	1000		101	75-125	0.726	20	
Surrogate: 1-Chlorooctane	*97.1*		*"*	*100*		*97.1*	*70-130*			
Surrogate: o-Terphenyl	*52.2*		*"*	*50.0*		*104*	*70-130*			
Calibration Check (P1K1210-CCV1)				Prepared & Analyzed: 11/12/21						
C6-C12	504	25.0	mg/kg wet	500		101	85-115			
>C12-C28	511	25.0	"	500		102	85-115			
Surrogate: 1-Chlorooctane	*111*		*"*	*100*		*111*	*70-130*			
Surrogate: o-Terphenyl	*49.3*		*"*	*50.0*		*98.6*	*70-130*			
Calibration Check (P1K1210-CCV2)				Prepared: 11/12/21 Analyzed: 11/13/21						
C6-C12	472	25.0	mg/kg wet	500		94.3	85-115			
>C12-C28	473	25.0	"	500		94.6	85-115			
Surrogate: 1-Chlorooctane	*106*		*"*	*100*		*106*	*70-130*			
Surrogate: o-Terphenyl	*46.9*		*"*	*50.0*		*93.8*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1210 - TX 1005										
Calibration Check (P1K1210-CCV3)				Prepared: 11/12/21 Analyzed: 11/13/21						
C6-C12	533	25.0	mg/kg wet	500		107	85-115			
>C12-C28	536	25.0	"	500		107	85-115			
Surrogate: 1-Chlorooctane	*117*		*"*	*100*		*117*	*70-130*			
Surrogate: o-Terphenyl	*51.6*		*"*	*50.0*		*103*	*70-130*			
Matrix Spike (P1K1210-MS1)		**Source: 1K12004-07**		Prepared: 11/12/21 Analyzed: 11/13/21						
C6-C12	1060	25.3	mg/kg dry	1010	20.0	103	75-125			
>C12-C28	1020	25.3	"	1010	16.5	99.6	75-125			
Surrogate: 1-Chlorooctane	*97.3*		*"*	*101*		*96.3*	*70-130*			
Surrogate: o-Terphenyl	*52.0*		*"*	*50.5*		*103*	*70-130*			
Matrix Spike Dup (P1K1210-MSD1)		**Source: 1K12004-07**		Prepared: 11/12/21 Analyzed: 11/13/21						
C6-C12	937	25.3	mg/kg dry	1010	20.0	90.8	75-125	12.7	20	
>C12-C28	961	25.3	"	1010	16.5	93.5	75-125	6.37	20	
Surrogate: 1-Chlorooctane	*124*		*"*	*101*		*123*	*70-130*			
Surrogate: o-Terphenyl	*45.7*		*"*	*50.5*		*90.4*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

ROI	Received on Ice
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
NPBEL C(	Chain of Custody was not generated at PBELAB
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 11/17/2021

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Larson & Associates, Inc.	Project:	Mack PW Release
P.O. Box 50685	Project Number:	21-0105-04
Midland TX, 79710	Project Manager:	Mark Larson

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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№ 1816

CHAIN-OF-CUSTOD

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Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 11/12/2021 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 1K12004

PROJECT LOCATION OR NAME: Mack PW Release

LAI PROJECT #: 21-0105-04 COLLECTOR: MB

Data Reported to:

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State: MST/NM

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX # ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 #	DIESEL - MOD 8015 #	OIL - MOD 8015 #	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES # ANIONS ☐ ALKALINITY ☐	FIELD NOTES
SW-40	1	11/9/21	1244	S	1				X		X		X	X	X														X			
SW-46	2	11/10/21	0932																													
SW-47	3	"	0934																													
SW-48	4	"	0936																													
SW-19	5	"	1028																													
SW-21	6	"	1032																													
SW-37	7	"	1100																													
TOTAL																																

RELINQUISHED BY:(Signature) DATE/TIME 11/12/21 0913 RECEIVED BY: (Signature) Olivia Bledsoe

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 4.8 5.8 THERM#: CF+1 L2
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISIDN Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

Sample Receipt Checklist

Yes		Notes
✓	Chain of custody present?	
✓	Chain of custody signed/dated/time when relinquished and received?	
✓	Sufficient quantity present on COC for all samples?	
✓	Samplers name present on COC?	
✓	Chain of custody agrees with sample labels?	
✓	Sample containers intact?	
X	Custody seals intact on sample bottles?	
✓	Samples in proper container/bottle?	
✓	Sufficient sample volume for indicated test?	
✓	All samples received within holding time?	
✓	Samples received with appropriate temp?	5.8
✓	Analysis requested for all samples submitted?	
	Shipping container/cooler in good condition?	N/A
	Custody seals intact on shipping container/cooler?	N/A

Login Notes:
2oz Jar 1K12004

PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

SAMPLE VARIANCE/NON-CONFORMANCE

Variance/Discrepancy:

Resolution:

Client Contacted

Name:

Date/Time:

NC Initiated by:_____ Approved by:_____

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW Release

Project Number: 21-0105-04

Location: New Mexico

Lab Order Number: 1K18004

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 11/23/21

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-30	1K18004-01	Soil	11/17/21 09:04	11-18-2021 10:11
S-31	1K18004-02	Soil	11/17/21 09:05	11-18-2021 10:11
S-32	1K18004-03	Soil	11/17/21 09:30	11-18-2021 10:11
S-33	1K18004-04	Soil	11/17/21 09:31	11-18-2021 10:11
S-35	1K18004-05	Soil	11/17/21 09:33	11-18-2021 10:11
S-36	1K18004-06	Soil	11/17/21 09:34	11-18-2021 10:11

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-30

1K18004-01 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:05	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:05	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:05	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:05	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:05	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*98.9 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 04:05*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*96.3 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 04:05*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**693**	1.02	mg/kg dry	1	P1K1813	11/19/21 16:12	11/22/21 23:04	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1K1903	11/19/21 09:29	11/19/21 09:31	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 18:34	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 18:34	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 18:34	TPH 8015M	
Surrogate: 1-Chlorooctane		*94.7 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 18:34*	*TPH 8015M*	
Surrogate: o-Terphenyl		*101 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 18:34*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	11/19/21 09:00	11/19/21 18:34	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-31

1K18004-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:27	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:27	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:27	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:27	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:27	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*97.2 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 04:27*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*97.3 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 04:27*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**208**	1.00	mg/kg dry	1	P1K1813	11/19/21 16:12	11/22/21 23:20	EPA 300.0	
% Moisture	ND	0.1	%	1	P1K1903	11/19/21 09:29	11/19/21 09:31	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 18:57	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 18:57	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 18:57	TPH 8015M	
Surrogate: 1-Chlorooctane		*91.9 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 18:57*	*TPH 8015M*	
Surrogate: o-Terphenyl		*97.2 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 18:57*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	11/19/21 09:00	11/19/21 18:57	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-32

1K18004-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:48	EPA 8021B	
Toluene	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:48	EPA 8021B	
Ethylbenzene	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:48	EPA 8021B	
Xylene (p/m)	ND	0.00200	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:48	EPA 8021B	
Xylene (o)	ND	0.00100	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 04:48	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*96.1 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 04:48*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*97.2 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 04:48*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**22.2**	1.00	mg/kg dry	1	P1K1905	11/19/21 16:08	11/22/21 12:42	EPA 300.0	
% Moisture	ND	0.1	%	1	P1K1903	11/19/21 09:29	11/19/21 09:31	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.0	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 19:20	TPH 8015M	
>C12-C28	ND	25.0	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 19:20	TPH 8015M	
>C28-C35	ND	25.0	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 19:20	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.0 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 19:20*	*TPH 8015M*	
Surrogate: o-Terphenyl		*93.6 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 19:20*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.0	mg/kg dry	1	[CALC]	11/19/21 09:00	11/19/21 19:20	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

S-33

1K18004-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:09	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:09	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:09	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:09	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:09	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*99.2 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 05:09*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.3 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 05:09*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**124**	1.01	mg/kg dry	1	P1K1905	11/19/21 16:08	11/22/21 12:57	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1903	11/19/21 09:29	11/19/21 09:31	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 19:43	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 19:43	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 19:43	TPH 8015M	
Surrogate: 1-Chlorooctane		*88.3 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 19:43*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.6 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 19:43*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	11/19/21 09:00	11/19/21 19:43	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1K18004-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:30	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:30	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:30	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:30	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:30	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*96.6 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 05:30*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*96.7 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 05:30*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**68.3**	1.01	mg/kg dry	1	P1K1905	11/19/21 16:08	11/22/21 13:12	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1903	11/19/21 09:29	11/19/21 09:31	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 20:06	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 20:06	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 20:06	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.4 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 20:06*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.1 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 20:06*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	11/19/21 09:00	11/19/21 20:06	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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1K18004-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:52	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:52	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:52	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:52	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1K1908	11/19/21 14:30	11/20/21 05:52	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 05:52*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.1 %*	*80-120*		*P1K1908*	*11/19/21 14:30*	*11/20/21 05:52*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**445**	1.01	mg/kg dry	1	P1K1905	11/19/21 16:08	11/22/21 13:28	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1K1903	11/19/21 09:29	11/19/21 09:31	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 20:29	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 20:29	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1K1904	11/19/21 09:00	11/19/21 20:29	TPH 8015M	
Surrogate: 1-Chlorooctane		*89.5 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 20:29*	*TPH 8015M*	
Surrogate: o-Terphenyl		*94.9 %*	*70-130*		*P1K1904*	*11/19/21 09:00*	*11/19/21 20:29*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	11/19/21 09:00	11/19/21 20:29	calc	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1908 - * DEFAULT PREP *** **										
Blank (P1K1908-BLK1)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.117*		*"*	*0.120*		*97.7*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.119*		*"*	*0.120*		*99.0*	*80-120*			
LCS (P1K1908-BS1)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	70-130			
Toluene	0.0998	0.00100	"	0.100		99.8	70-130			
Ethylbenzene	0.103	0.00100	"	0.100		103	70-130			
Xylene (p/m)	0.212	0.00200	"	0.200		106	70-130			
Xylene (o)	0.0953	0.00100	"	0.100		95.3	70-130			
Surrogate: 4-Bromofluorobenzene	*0.122*		*"*	*0.120*		*102*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.0*	*80-120*			
LCS Dup (P1K1908-BSD1)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.102	0.00100	mg/kg wet	0.100		102	70-130	3.14	20	
Toluene	0.0969	0.00100	"	0.100		96.9	70-130	2.95	20	
Ethylbenzene	0.100	0.00100	"	0.100		100	70-130	3.03	20	
Xylene (p/m)	0.206	0.00200	"	0.200		103	70-130	3.12	20	
Xylene (o)	0.0915	0.00100	"	0.100		91.5	70-130	4.03	20	
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*98.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.120*		*"*	*0.120*		*100*	*80-120*			
Calibration Blank (P1K1908-CCB1)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.00		mg/kg wet							
Toluene	0.770		"							
Ethylbenzene	0.210		"							
Xylene (p/m)	0.890		"							
Xylene (o)	0.340		"							
Surrogate: 4-Bromofluorobenzene	*0.123*		*"*	*0.120*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.117*		*"*	*0.120*		*97.2*	*80-120*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1908 - * DEFAULT PREP *** **										
Calibration Blank (P1K1908-CCB2)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.00		mg/kg wet							
Toluene	0.660		"							
Ethylbenzene	0.270		"							
Xylene (p/m)	0.860		"							
Xylene (o)	0.360		"							
Surrogate: 4-Bromofluorobenzene	*0.119*		*"*	*0.120*		*99.5*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.117*		*"*	*0.120*		*97.4*	*80-120*			
Calibration Blank (P1K1908-CCB3)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.120		mg/kg wet							
Toluene	0.890		"							
Ethylbenzene	0.240		"							
Xylene (p/m)	0.770		"							
Xylene (o)	0.410		"							
Surrogate: 4-Bromofluorobenzene	*0.122*		*"*	*0.120*		*102*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.7*	*80-120*			
Calibration Check (P1K1908-CCV1)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.0918	0.00100	mg/kg wet	0.100		91.8	80-120			
Toluene	0.0912	0.00100	"	0.100		91.2	80-120			
Ethylbenzene	0.0890	0.00100	"	0.100		89.0	80-120			
Xylene (p/m)	0.196	0.00200	"	0.200		97.8	80-120			
Xylene (o)	0.0902	0.00100	"	0.100		90.2	80-120			
Surrogate: 1,4-Difluorobenzene	*0.117*		*"*	*0.120*		*97.7*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.121*		*"*	*0.120*		*101*	*75-125*			
Calibration Check (P1K1908-CCV2)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.103	0.00100	mg/kg wet	0.100		103	80-120			
Toluene	0.102	0.00100	"	0.100		102	80-120			
Ethylbenzene	0.0994	0.00100	"	0.100		99.4	80-120			
Xylene (p/m)	0.217	0.00200	"	0.200		109	80-120			
Xylene (o)	0.101	0.00100	"	0.100		101	80-120			
Surrogate: 4-Bromofluorobenzene	*0.122*		*"*	*0.120*		*101*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.118*		*"*	*0.120*		*98.7*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1908 - * DEFAULT PREP *** **										
Calibration Check (P1K1908-CCV3)				Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.0939	0.00100	mg/kg wet	0.100		93.9	80-120			
Toluene	0.0960	0.00100	"	0.100		96.0	80-120			
Ethylbenzene	0.0914	0.00100	"	0.100		91.4	80-120			
Xylene (p/m)	0.199	0.00200	"	0.200		99.6	80-120			
Xylene (o)	0.0939	0.00100	"	0.100		93.9	80-120			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.0*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.123*		"	*0.120*		*103*	*75-125*			
Matrix Spike (P1K1908-MS1)		**Source: 1K18003-19**		Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.0998	0.00115	mg/kg dry	0.115	ND	86.9	80-120			
Toluene	0.0974	0.00115	"	0.115	ND	84.8	80-120			
Ethylbenzene	0.0941	0.00115	"	0.115	ND	81.9	80-120			
Xylene (p/m)	0.192	0.00230	"	0.230	ND	83.4	80-120			
Xylene (o)	0.0915	0.00115	"	0.115	ND	79.6	80-120			
Surrogate: 1,4-Difluorobenzene	*0.139*		"	*0.138*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.149*		"	*0.138*		*108*	*80-120*			
Matrix Spike Dup (P1K1908-MSD1)		**Source: 1K18003-19**		Prepared: 11/19/21 Analyzed: 11/20/21						
Benzene	0.107	0.00115	mg/kg dry	0.115	ND	93.4	80-120	7.26	20	
Toluene	0.102	0.00115	"	0.115	ND	88.7	80-120	4.52	20	
Ethylbenzene	0.0979	0.00115	"	0.115	ND	85.1	80-120	3.93	20	
Xylene (p/m)	0.200	0.00230	"	0.230	ND	86.9	80-120	4.02	20	
Xylene (o)	0.0926	0.00115	"	0.115	ND	80.6	80-120	1.25	20	
Surrogate: 4-Bromofluorobenzene	*0.149*		"	*0.138*		*108*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.141*		"	*0.138*		*102*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1813 - * DEFAULT PREP *** **										
Blank (P1K1813-BLK1)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1K1813-BS1)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	40.9		mg/kg	40.0		102	90-110			
LCS Dup (P1K1813-BSD1)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	43.7		mg/kg	40.0		109	90-110	6.52	10	
Calibration Blank (P1K1813-CCB1)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1K1813-CCB2)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1K1813-CCV1)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	19.6		mg/kg	20.0		98.0	90-110			
Calibration Check (P1K1813-CCV2)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	19.4		mg/kg	20.0		96.8	90-110			
Calibration Check (P1K1813-CCV3)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	18.8		mg/kg	20.0		94.0	90-110			
Matrix Spike (P1K1813-MS1)		**Source: 1K18003-05**		Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	584	1.15	mg/kg dry	575	51.1	92.7	80-120			
Matrix Spike (P1K1813-MS2)		**Source: 1K18003-15**		Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	618	1.15	mg/kg dry	575	99.6	90.2	80-120			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1813 - * DEFAULT PREP *** **										
Matrix Spike Dup (P1K1813-MSD1)	**Source: 1K18003-05**			Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	557	1.15	mg/kg dry	575	51.1	88.0	80-120	4.73	20	
Matrix Spike Dup (P1K1813-MSD2)	**Source: 1K18003-15**			Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	624	1.15	mg/kg dry	575	99.6	91.2	80-120	0.877	20	
Batch P1K1903 - * DEFAULT PREP *** **										
Blank (P1K1903-BLK1)				Prepared & Analyzed: 11/19/21						
% Moisture	ND	0.1	%							
Blank (P1K1903-BLK2)				Prepared & Analyzed: 11/19/21						
% Moisture	ND	0.1	%							
Blank (P1K1903-BLK3)				Prepared & Analyzed: 11/19/21						
% Moisture	ND	0.1	%							
Duplicate (P1K1903-DUP1)	**Source: 1K18003-10**			Prepared & Analyzed: 11/19/21						
% Moisture	13.0	0.1	%		13.0			0.00	20	
Duplicate (P1K1903-DUP2)	**Source: 1K18003-20**			Prepared & Analyzed: 11/19/21						
% Moisture	13.0	0.1	%		13.0			0.00	20	
Duplicate (P1K1903-DUP3)	**Source: 1K18008-02**			Prepared & Analyzed: 11/19/21						
% Moisture	ND	0.1	%		ND				20	
Duplicate (P1K1903-DUP4)	**Source: 1K18012-03**			Prepared & Analyzed: 11/19/21						
% Moisture	ND	0.1	%		ND				20	

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1903 - * DEFAULT PREP *** **										
Duplicate (P1K1903-DUP5)	**Source: 1K18018-02**			Prepared & Analyzed: 11/19/21						
% Moisture	ND	0.1	%		5.0			200	20	R3
Batch P1K1905 - * DEFAULT PREP *** **										
Blank (P1K1905-BLK1)				Prepared & Analyzed: 11/19/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1K1905-BS1)				Prepared & Analyzed: 11/19/21						
Chloride	37.1		mg/kg	40.0		92.7	90-110			
LCS Dup (P1K1905-BSD1)				Prepared & Analyzed: 11/19/21						
Chloride	36.9		mg/kg	40.0		92.3	90-110	0.459	10	
Calibration Blank (P1K1905-CCB1)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	0.00		mg/kg wet							
Calibration Blank (P1K1905-CCB2)				Prepared & Analyzed: 11/19/21						
Chloride	0.00		mg/kg wet							
Calibration Check (P1K1905-CCV1)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	19.2		mg/kg	20.0		96.1	90-110			
Calibration Check (P1K1905-CCV2)				Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	18.6		mg/kg	20.0		92.8	90-110			
Calibration Check (P1K1905-CCV3)				Prepared: 11/19/21 Analyzed: 11/20/21						
Chloride	18.7		mg/kg	20.0		93.6	90-110			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1905 - * DEFAULT PREP *** **										
Matrix Spike (P1K1905-MS1)	**Source: 1K19001-01**			Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	2430	11.8	mg/kg dry	1180	1490	79.4	80-120			QM-4X
Matrix Spike (P1K1905-MS2)	**Source: 1K18005-01**			Prepared & Analyzed: 11/19/21						
Chloride	1380	5.10	mg/kg dry	510	602	153	80-120			QM-4X
Matrix Spike Dup (P1K1905-MSD1)	**Source: 1K19001-01**			Prepared: 11/19/21 Analyzed: 11/22/21						
Chloride	2380	11.8	mg/kg dry	1180	1490	75.6	80-120	1.89	20	QM-4X
Matrix Spike Dup (P1K1905-MSD2)	**Source: 1K18005-01**			Prepared & Analyzed: 11/19/21						
Chloride	991	5.10	mg/kg dry	510	602	76.1	80-120	33.1	20	QM-4X

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1904 - TX 1005										
Blank (P1K1904-BLK1)				Prepared & Analyzed: 11/19/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*87.2*		*"*	*100*		*87.2*	*70-130*			
Surrogate: o-Terphenyl	*46.2*		*"*	*50.0*		*92.3*	*70-130*			
LCS (P1K1904-BS1)				Prepared & Analyzed: 11/19/21						
C6-C12	1020	25.0	mg/kg wet	1000		102	75-125			
>C12-C28	921	25.0	"	1000		92.1	75-125			
Surrogate: 1-Chlorooctane	*95.8*		*"*	*100*		*95.8*	*70-130*			
Surrogate: o-Terphenyl	*55.0*		*"*	*50.0*		*110*	*70-130*			
LCS Dup (P1K1904-BSD1)				Prepared & Analyzed: 11/19/21						
C6-C12	1040	25.0	mg/kg wet	1000		104	75-125	1.51	20	
>C12-C28	931	25.0	"	1000		93.1	75-125	1.02	20	
Surrogate: 1-Chlorooctane	*97.8*		*"*	*100*		*97.8*	*70-130*			
Surrogate: o-Terphenyl	*55.1*		*"*	*50.0*		*110*	*70-130*			
Calibration Check (P1K1904-CCV1)				Prepared & Analyzed: 11/19/21						
C6-C12	506	25.0	mg/kg wet	500		101	85-115			
>C12-C28	470	25.0	"	500		94.0	85-115			
Surrogate: 1-Chlorooctane	*122*		*"*	*100*		*122*	*70-130*			
Surrogate: o-Terphenyl	*56.6*		*"*	*50.0*		*113*	*70-130*			
Calibration Check (P1K1904-CCV2)				Prepared & Analyzed: 11/19/21						
C6-C12	494	25.0	mg/kg wet	500		98.8	85-115			
>C12-C28	474	25.0	"	500		94.8	85-115			
Surrogate: 1-Chlorooctane	*118*		*"*	*100*		*118*	*70-130*			
Surrogate: o-Terphenyl	*56.1*		*"*	*50.0*		*112*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1K1904 - TX 1005										
Calibration Check (P1K1904-CCV3)				Prepared: 11/19/21 Analyzed: 11/20/21						
C6-C12	501	25.0	mg/kg wet	500		100	85-115			
>C12-C28	485	25.0	"	500		97.1	85-115			
Surrogate: 1-Chlorooctane	*120*		*"*	*100*		*120*	*70-130*			
Surrogate: o-Terphenyl	*56.6*		*"*	*50.0*		*113*	*70-130*			
Matrix Spike (P1K1904-MS1)		**Source: 1K18019-03**		Prepared: 11/19/21 Analyzed: 11/20/21						
C6-C12	868	25.0	mg/kg dry	1000	24.4	84.3	75-125			
>C12-C28	823	25.0	"	1000	22.3	80.0	75-125			
Surrogate: 1-Chlorooctane	*119*		*"*	*100*		*119*	*70-130*			
Surrogate: o-Terphenyl	*45.7*		*"*	*50.0*		*91.3*	*70-130*			
Matrix Spike Dup (P1K1904-MSD1)		**Source: 1K18019-03**		Prepared: 11/19/21 Analyzed: 11/20/21						
C6-C12	899	25.0	mg/kg dry	1000	24.4	87.5	75-125	3.68	20	
>C12-C28	857	25.0	"	1000	22.3	83.4	75-125	4.15	20	
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*46.8*		*"*	*50.0*		*93.5*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

ROI	Received on Ice
R3	The RPD exceeded the acceptance limit due to sample matrix effects.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
NPBEL C(	Chain of Custody was not generated at PBELAB
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 11/23/2021

Brent Barron, Laboratory Director/Technical Director

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW Release
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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If you have received this material in error, please notify us immediately at 432-686-7235.

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№ 1762

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 11-17-2021 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 21K18004

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: MB

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐	HOLDPAH ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D.W. 200.8 ☐	TCLP ☐	RCI ☐	TOX ☐	FLASHPOINT ☐	TDS ☐	TSS ☐	% MOISTURE ☐	pH ☐	HEXAVALENT CHROMIUM ☐	CYANIDE ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDE ☒	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
S-30	1	11-17-21	0904	S	1				X		X		X	X	X	X																									X				
S-31	2	"	0905	"	1				"		"		"	"	"	"																									"				
S-32	3	"	0930	"	1				"		"		"	"	"	"																									"				
S-33	4	"	0931	"	1				"		"		"	"	"	"																									"				
S-35	5	"	0933	"	1				"		"		"	"	"	"																									"				
S-36	6	"	0934	"	2				"		"		"	"	"	"																									"				

TOTAL 6

RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
	11/18/21 1014	
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)

LABORATORY: TBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: -0.3 / 1.3 THERM#: L2 CFH1
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM
Released to Imaging: 6/17/2022 2:48:59 PM

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PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

Sample Receipt Checklist

Yes		Notes
✓	Chain of custody present?	
✓	Chain of custody signed/dated/time when relinquished and received?	
✓	Sample date/time present on COC for all samples?	
✓	Samplers name present on COC?	
✓	Chain of Custody agrees with sample labels?	
✓	Sample containers intact?	
X	Custody seals intact on sample bottles?	
✓	Samples in proper container/bottle?	
✓	Sufficient sample volume for indicated test?	
✓	All samples received within holding time?	
✓	Samples received cool to appropriate temp?	1.3
✓	Analysis requested for all samples submitted?	
	All bottles/container/cooler in good condition?	N/A
	Custody seals intact on shipping container/cooler?	N/A

Login Notes:
2oz Jar 1K180004

PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

SAMPLE VARIANCE/NON-CONFORMANCE

Variance/Discrepancy:

Resolution:

Client Contacted

Name:

Date/Time:

NC Initiated by:_____ Approved by:_____

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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ANALYTICAL REPORT

Eurofins Xenco, Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-9566-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
12/29/2021 8:42:36 AM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Laboratory Job ID: 880-9566-1
SDG: 21-0105-04

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Eurofins Xenco, Midland
12/29/2021

Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-9566-1
Project/Site: Mack PW SDG: 21-0105-04

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Job ID: 880-9566-1

Laboratory: Eurofins Xenco, Midland

Narrative

Job Narrative
880-9566-1

Receipt
The samples were received on 12/21/2021 8:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C

GC VOA
Method 8021B: Surrogate recovery for the following sample was outside control limits: (880-9573-A-21-D). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: Surrogate recovery for the following samples were outside control limits: SW-6 (880-9566-1), SW-7 (880-9566-2) and SW-25 (880-9566-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-15385 and analytical batch 880-15413 recovered outside control limits for the following analytes: Gasoline Range Organics (GRO)-C6-C10

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

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Client Sample ID: SW-6

Lab Sample ID: 880-9566-1
Matrix: Solid
Date Collected: 12/15/21 10:22
Date Received: 12/21/21 08:35

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00202**		0.00202		mg/Kg		12/21/21 14:00	12/21/21 18:14	1
Toluene	**0.00226**		0.00202		mg/Kg		12/21/21 14:00	12/21/21 18:14	1
Ethylbenzene	**0.0164**		0.00202		mg/Kg		12/21/21 14:00	12/21/21 18:14	1
m,p-Xylenes	<0.00403	U	0.00403		mg/Kg		12/21/21 14:00	12/21/21 18:14	1
o-Xylene	**0.00218**		0.00202		mg/Kg		12/21/21 14:00	12/21/21 18:14	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		12/21/21 14:00	12/21/21 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*161*	*S1+*	*70 - 130*	*12/21/21 14:00*	*12/21/21 18:14*	*1*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*	*12/21/21 14:00*	*12/21/21 18:14*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0229**		0.00403		mg/Kg			12/29/21 09:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/29/21 09:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		12/22/21 14:29	12/24/21 02:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/22/21 14:29	12/24/21 02:58	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/22/21 14:29	12/24/21 02:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*108*		*70 - 130*	*12/22/21 14:29*	*12/24/21 02:58*	*1*
o-Terphenyl (Surr)	*121*		*70 - 130*	*12/22/21 14:29*	*12/24/21 02:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**639**		4.99		mg/Kg			12/22/21 05:22	1

Client Sample ID: SW-7

Lab Sample ID: 880-9566-2
Matrix: Solid
Date Collected: 12/15/21 10:29
Date Received: 12/21/21 08:35

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:00	12/21/21 18:34	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:00	12/21/21 18:34	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:00	12/21/21 18:34	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		12/21/21 14:00	12/21/21 18:34	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:00	12/21/21 18:34	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/21/21 14:00	12/21/21 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*161*	*S1+*	*70 - 130*	*12/21/21 14:00*	*12/21/21 18:34*	*1*
1,4-Difluorobenzene (Surr)	*130*		*70 - 130*	*12/21/21 14:00*	*12/21/21 18:34*	*1*

Eurofins Xenco, Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Client Sample ID: SW-7

Date Collected: 12/15/21 10:29
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-2
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/29/21 09:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/29/21 09:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		12/22/21 14:29	12/24/21 03:18	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/22/21 14:29	12/24/21 03:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/22/21 14:29	12/24/21 03:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*107*		*70 - 130*	*12/22/21 14:29*	*12/24/21 03:18*	*1*
o-Terphenyl (Surr)	*120*		*70 - 130*	*12/22/21 14:29*	*12/24/21 03:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**150**		5.04		mg/Kg			12/22/21 05:37	1

Client Sample ID: SW-25

Date Collected: 12/15/21 11:03
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:00	12/21/21 16:52	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:00	12/21/21 16:52	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:00	12/21/21 16:52	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		12/21/21 14:00	12/21/21 16:52	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:00	12/21/21 16:52	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		12/21/21 14:00	12/21/21 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*12/21/21 14:00*	*12/21/21 16:52*	*1*
1,4-Difluorobenzene (Surr)	*33*	*S1-*	*70 - 130*	*12/21/21 14:00*	*12/21/21 16:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			12/29/21 09:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/29/21 09:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		12/22/21 14:29	12/24/21 03:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/22/21 14:29	12/24/21 03:38	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Client Sample ID: SW-25

Date Collected: 12/15/21 11:03
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/22/21 14:29	12/24/21 03:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*99*		*70 - 130*	*12/22/21 14:29*	*12/24/21 03:38*	*1*
o-Terphenyl (Surr)	*111*		*70 - 130*	*12/22/21 14:29*	*12/24/21 03:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**225**		5.02		mg/Kg			12/22/21 06:23	1

Client Sample ID: SW-30

Date Collected: 12/15/21 11:09
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:23	12/22/21 05:51	1
Toluene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:23	12/22/21 05:51	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:23	12/22/21 05:51	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		12/21/21 14:23	12/22/21 05:51	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		12/21/21 14:23	12/22/21 05:51	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		12/21/21 14:23	12/22/21 05:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*12/21/21 14:23*	*12/22/21 05:51*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*12/21/21 14:23*	*12/22/21 05:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			12/29/21 09:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			12/29/21 09:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		12/22/21 14:29	12/24/21 03:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		12/22/21 14:29	12/24/21 03:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		12/22/21 14:29	12/24/21 03:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*98*		*70 - 130*	*12/22/21 14:29*	*12/24/21 03:58*	*1*
o-Terphenyl (Surr)	*110*		*70 - 130*	*12/22/21 14:29*	*12/24/21 03:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.4**		5.05		mg/Kg			12/22/21 06:39	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Client Sample ID: SW-44

Date Collected: 12/15/21 11:30
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-5

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		12/21/21 14:23	12/22/21 06:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		12/21/21 14:23	12/22/21 06:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		12/21/21 14:23	12/22/21 06:11	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		12/21/21 14:23	12/22/21 06:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		12/21/21 14:23	12/22/21 06:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		12/21/21 14:23	12/22/21 06:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*12/21/21 14:23*	*12/22/21 06:11*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*12/21/21 14:23*	*12/22/21 06:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			12/29/21 09:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			12/29/21 09:33	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		12/22/21 14:29	12/24/21 04:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/22/21 14:29	12/24/21 04:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/22/21 14:29	12/24/21 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*100*		*70 - 130*	*12/22/21 14:29*	*12/24/21 04:18*	*1*
o-Terphenyl (Surr)	*114*		*70 - 130*	*12/22/21 14:29*	*12/24/21 04:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**176**		5.00		mg/Kg			12/22/21 07:25	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)										
880-9566-1	SW-6	161 S1+	113										
880-9566-2	SW-7	161 S1+	130										
880-9566-3	SW-25	126	33 S1-										
880-9566-4	SW-30	128	98										
880-9566-5	SW-44	122	95										
880-9573-A-21-B MS	Matrix Spike	125	101										
880-9573-A-21-C MSD	Matrix Spike Duplicate	112	98										
890-1735-A-1-A MS	Matrix Spike	104	103										
890-1735-A-1-B MSD	Matrix Spike Duplicate	104	103										
LCS 880-15226/1-A	Lab Control Sample	105	107										
LCS 880-15273/1-A	Lab Control Sample	113	103										
LCSD 880-15226/2-A	Lab Control Sample Dup	101	106										
LCSD 880-15273/2-A	Lab Control Sample Dup	110	96										
MB 880-15225/5-A	Method Blank	125	105										
MB 880-15225/5-A	Method Blank	115	104										
MB 880-15273/5-A	Method Blank	121	93										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)											
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)										
880-9566-1	SW-6	108	121										
880-9566-2	SW-7	107	120										
880-9566-3	SW-25	99	111										
880-9566-4	SW-30	98	110										
880-9566-5	SW-44	100	114										
890-1740-A-1-D MS	Matrix Spike	96	97										
890-1740-A-1-E MSD	Matrix Spike Duplicate	94	96										
LCS 880-15385/2-A	Lab Control Sample	116	125										
LCSD 880-15385/3-A	Lab Control Sample Dup	98	109										
MB 880-15385/1-A	Method Blank	152 S1+	177 S1+										

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-15225/5-A
Matrix: Solid
Analysis Batch: 15228

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15225

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:28	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		12/21/21 07:13	12/21/21 10:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/21/21 07:13	12/21/21 10:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*12/21/21 07:13*	*12/21/21 10:28*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*12/21/21 07:13*	*12/21/21 10:28*	*1*

Lab Sample ID: MB 880-15225/5-A
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15225

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:35	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		12/21/21 07:13	12/21/21 10:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/21/21 07:13	12/21/21 10:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/21/21 07:13	12/21/21 10:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*12/21/21 07:13*	*12/21/21 10:35*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*12/21/21 07:13*	*12/21/21 10:35*	*1*

Lab Sample ID: LCS 880-15226/1-A
Matrix: Solid
Analysis Batch: 15228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15226

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09163		mg/Kg		92	70 - 130		
Toluene			0.100	0.08389		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.08356		mg/Kg		84	70 - 130		
m,p-Xylenes			0.200	0.1730		mg/Kg		87	70 - 130		
o-Xylene			0.100	0.08483		mg/Kg		85	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-15226/2-A
Matrix: Solid
Analysis Batch: 15228

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15226

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1003		mg/Kg		100	70 - 130	9	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-15226/2-A
Matrix: Solid
Analysis Batch: 15228

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15226

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.08843		mg/Kg		88	70 - 130	5	35
Ethylbenzene			0.100	0.08907		mg/Kg		89	70 - 130	6	35
m,p-Xylenes			0.200	0.1839		mg/Kg		92	70 - 130	6	35
o-Xylene			0.100	0.08987		mg/Kg		90	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*

Lab Sample ID: 890-1735-A-1-A MS
Matrix: Solid
Analysis Batch: 15228

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U	0.101	0.1059		mg/Kg		105	70 - 130
Toluene	<0.00199	U	0.101	0.09720		mg/Kg		96	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.09341		mg/Kg		92	70 - 130
m,p-Xylenes	<0.00398	U	0.202	0.1925		mg/Kg		95	70 - 130
o-Xylene	<0.00199	U	0.101	0.09339		mg/Kg		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-1735-A-1-B MSD
Matrix: Solid
Analysis Batch: 15228

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 15226

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.1034		mg/Kg		104	70 - 130	2	35
Toluene	<0.00199	U	0.0996	0.09501		mg/Kg		95	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.0996	0.09195		mg/Kg		92	70 - 130	2	35
m,p-Xylenes	<0.00398	U	0.199	0.1904		mg/Kg		96	70 - 130	1	35
o-Xylene	<0.00199	U	0.0996	0.09237		mg/Kg		93	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 880-15273/5-A
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15273

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:23	12/21/21 23:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:23	12/21/21 23:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:23	12/21/21 23:47	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		12/21/21 14:23	12/21/21 23:47	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-15273/5-A
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15273

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		12/21/21 14:23	12/21/21 23:47	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		12/21/21 14:23	12/21/21 23:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*12/21/21 14:23*	*12/21/21 23:47*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*12/21/21 14:23*	*12/21/21 23:47*	*1*

Lab Sample ID: LCS 880-15273/1-A
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15273

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1036		mg/Kg		104	70 - 130		
Toluene			0.100	0.1036		mg/Kg		104	70 - 130		
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130		
m,p-Xylenes			0.200	0.1970		mg/Kg		99	70 - 130		
o-Xylene			0.100	0.09487		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-15273/2-A
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15273

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09550		mg/Kg		95	70 - 130	8	35
Toluene			0.100	0.1022		mg/Kg		102	70 - 130	1	35
Ethylbenzene			0.100	0.09699		mg/Kg		97	70 - 130	5	35
m,p-Xylenes			0.200	0.1924		mg/Kg		96	70 - 130	2	35
o-Xylene			0.100	0.09144		mg/Kg		91	70 - 130	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-9573-A-21-B MS
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15273

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00202	U	0.0998	0.08751		mg/Kg		86	70 - 130		
Toluene	0.00381		0.0998	0.08948		mg/Kg		86	70 - 130		
Ethylbenzene	<0.00202	U	0.0998	0.09245		mg/Kg		92	70 - 130		
m,p-Xylenes	<0.00403	U	0.200	0.1639		mg/Kg		81	70 - 130		
o-Xylene	<0.00202	U	0.0998	0.07809		mg/Kg		77	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

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

Lab Sample ID: 880-9573-A-21-B MS
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15273

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-9573-A-21-C MSD
Matrix: Solid
Analysis Batch: 15227

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 15273

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0994	0.07969		mg/Kg		79	70 - 130	9	35
Toluene	0.00381		0.0994	0.07871		mg/Kg		75	70 - 130	13	35
Ethylbenzene	<0.00202	U	0.0994	0.07587		mg/Kg		75	70 - 130	20	35
m,p-Xylenes	<0.00403	U	0.199	0.1443		mg/Kg		71	70 - 130	13	35
o-Xylene	<0.00202	U	0.0994	0.07490		mg/Kg		74	70 - 130	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

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

Lab Sample ID: MB 880-15385/1-A
Matrix: Solid
Analysis Batch: 15413

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15385

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		12/22/21 14:29	12/23/21 20:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		12/22/21 14:29	12/23/21 20:18	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		12/22/21 14:29	12/23/21 20:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	*152*	*S1+*	*70 - 130*	*12/22/21 14:29*	*12/23/21 20:18*	*1*
o-Terphenyl (Surr)	*177*	*S1+*	*70 - 130*	*12/22/21 14:29*	*12/23/21 20:18*	*1*

Lab Sample ID: LCS 880-15385/2-A
Matrix: Solid
Analysis Batch: 15413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15385

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	869.0		mg/Kg		87	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	826.1		mg/Kg		83	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	*116*		*70 - 130*
o-Terphenyl (Surr)	*125*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-15385/3-A
Matrix: Solid
Analysis Batch: 15413

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15385

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1239	*1	mg/Kg		124	70 - 130	35	20
Diesel Range Organics (Over C10-C28)			1000	776.5		mg/Kg		78	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*98*		*70 - 130*
o-Terphenyl (Surr)	*109*		*70 - 130*

Lab Sample ID: 890-1740-A-1-D MS
Matrix: Solid
Analysis Batch: 15413

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15385

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	996	1249		mg/Kg		121	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	996	794.6		mg/Kg		75	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*96*		*70 - 130*
o-Terphenyl (Surr)	*97*		*70 - 130*

Lab Sample ID: 890-1740-A-1-E MSD
Matrix: Solid
Analysis Batch: 15413

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 15385

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	995	1226		mg/Kg		118	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	995	777.4		mg/Kg		74	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*94*		*70 - 130*
o-Terphenyl (Surr)	*96*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-15219/1-A
Matrix: Solid
Analysis Batch: 15393

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			12/22/21 01:16	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 880-15219/2-A
Matrix: Solid
Analysis Batch: 15393

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	255.7		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-15219/3-A
Matrix: Solid
Analysis Batch: 15393

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	254.6		mg/Kg		102	90 - 110	0	20

Lab Sample ID: 880-9566-2 MS
Matrix: Solid
Analysis Batch: 15393

Client Sample ID: SW-7
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	150		252	398.2		mg/Kg		98	90 - 110		

Lab Sample ID: 880-9566-2 MSD
Matrix: Solid
Analysis Batch: 15393

Client Sample ID: SW-7
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	150		252	397.5		mg/Kg		98	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

GC VOA

Prep Batch: 15225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-15225/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 15226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Total/NA	Solid	5035	
880-9566-2	SW-7	Total/NA	Solid	5035	
880-9566-3	SW-25	Total/NA	Solid	5035	
LCS 880-15226/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15226/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1735-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
890-1735-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 15227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-4	SW-30	Total/NA	Solid	8021B	15273
880-9566-5	SW-44	Total/NA	Solid	8021B	15273
MB 880-15225/5-A	Method Blank	Total/NA	Solid	8021B	15225
MB 880-15273/5-A	Method Blank	Total/NA	Solid	8021B	15273
LCS 880-15273/1-A	Lab Control Sample	Total/NA	Solid	8021B	15273
LCSD 880-15273/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15273
880-9573-A-21-B MS	Matrix Spike	Total/NA	Solid	8021B	15273
880-9573-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	15273

Analysis Batch: 15228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Total/NA	Solid	8021B	15226
880-9566-2	SW-7	Total/NA	Solid	8021B	15226
880-9566-3	SW-25	Total/NA	Solid	8021B	15226
MB 880-15225/5-A	Method Blank	Total/NA	Solid	8021B	15225
LCS 880-15226/1-A	Lab Control Sample	Total/NA	Solid	8021B	15226
LCSD 880-15226/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	15226
890-1735-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	15226
890-1735-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	15226

Prep Batch: 15273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-4	SW-30	Total/NA	Solid	5035	
880-9566-5	SW-44	Total/NA	Solid	5035	
MB 880-15273/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-15273/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-15273/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9573-A-21-B MS	Matrix Spike	Total/NA	Solid	5035	
880-9573-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 15716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Total/NA	Solid	Total BTEX	
880-9566-2	SW-7	Total/NA	Solid	Total BTEX	
880-9566-3	SW-25	Total/NA	Solid	Total BTEX	
880-9566-4	SW-30	Total/NA	Solid	Total BTEX	
880-9566-5	SW-44	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

GC Semi VOA

Prep Batch: 15385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Total/NA	Solid	8015NM Prep	
880-9566-2	SW-7	Total/NA	Solid	8015NM Prep	
880-9566-3	SW-25	Total/NA	Solid	8015NM Prep	
880-9566-4	SW-30	Total/NA	Solid	8015NM Prep	
880-9566-5	SW-44	Total/NA	Solid	8015NM Prep	
MB 880-15385/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-15385/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-15385/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1740-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1740-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 15413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Total/NA	Solid	8015B NM	15385
880-9566-2	SW-7	Total/NA	Solid	8015B NM	15385
880-9566-3	SW-25	Total/NA	Solid	8015B NM	15385
880-9566-4	SW-30	Total/NA	Solid	8015B NM	15385
880-9566-5	SW-44	Total/NA	Solid	8015B NM	15385
MB 880-15385/1-A	Method Blank	Total/NA	Solid	8015B NM	15385
LCS 880-15385/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	15385
LCSD 880-15385/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	15385
890-1740-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	15385
890-1740-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	15385

Analysis Batch: 15715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Total/NA	Solid	8015 NM	
880-9566-2	SW-7	Total/NA	Solid	8015 NM	
880-9566-3	SW-25	Total/NA	Solid	8015 NM	
880-9566-4	SW-30	Total/NA	Solid	8015 NM	
880-9566-5	SW-44	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 15219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Soluble	Solid	DI Leach	
880-9566-2	SW-7	Soluble	Solid	DI Leach	
880-9566-3	SW-25	Soluble	Solid	DI Leach	
880-9566-4	SW-30	Soluble	Solid	DI Leach	
880-9566-5	SW-44	Soluble	Solid	DI Leach	
MB 880-15219/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-15219/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-15219/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9566-2 MS	SW-7	Soluble	Solid	DI Leach	
880-9566-2 MSD	SW-7	Soluble	Solid	DI Leach	

Analysis Batch: 15393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-1	SW-6	Soluble	Solid	300.0	15219
880-9566-2	SW-7	Soluble	Solid	300.0	15219

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

HPLC/IC (Continued)

Analysis Batch: 15393 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9566-3	SW-25	Soluble	Solid	300.0	15219
880-9566-4	SW-30	Soluble	Solid	300.0	15219
880-9566-5	SW-44	Soluble	Solid	300.0	15219
MB 880-15219/1-A	Method Blank	Soluble	Solid	300.0	15219
LCS 880-15219/2-A	Lab Control Sample	Soluble	Solid	300.0	15219
LCSD 880-15219/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	15219
880-9566-2 MS	SW-7	Soluble	Solid	300.0	15219
880-9566-2 MSD	SW-7	Soluble	Solid	300.0	15219

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Client Sample ID: SW-6

Date Collected: 12/15/21 10:22
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	15226	12/21/21 14:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15228	12/21/21 18:14	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15716	12/29/21 09:36	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15715	12/29/21 09:33	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	15385	12/22/21 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15413	12/24/21 02:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	15219	12/21/21 09:00	CA	XEN MID
Soluble	Analysis	300.0		1			15393	12/22/21 05:22	SC	XEN MID

Client Sample ID: SW-7

Date Collected: 12/15/21 10:29
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	15226	12/21/21 14:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15228	12/21/21 18:34	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15716	12/29/21 09:36	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15715	12/29/21 09:33	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	15385	12/22/21 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15413	12/24/21 03:18	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	15219	12/21/21 09:00	CA	XEN MID
Soluble	Analysis	300.0		1			15393	12/22/21 05:37	SC	XEN MID

Client Sample ID: SW-25

Date Collected: 12/15/21 11:03
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	15226	12/21/21 14:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15228	12/21/21 16:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15716	12/29/21 09:36	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15715	12/29/21 09:33	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	15385	12/22/21 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15413	12/24/21 03:38	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	15219	12/21/21 09:00	CA	XEN MID
Soluble	Analysis	300.0		1			15393	12/22/21 06:23	SC	XEN MID

Client Sample ID: SW-30

Date Collected: 12/15/21 11:09
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	15273	12/21/21 14:23	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15227	12/22/21 05:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15716	12/29/21 09:36	AJ	XEN MID

Eurofins Xenco, Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Client Sample ID: SW-30

Date Collected: 12/15/21 11:09
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			15715	12/29/21 09:33	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	15385	12/22/21 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15413	12/24/21 03:58	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	15219	12/21/21 09:00	CA	XEN MID
Soluble	Analysis	300.0		1			15393	12/22/21 06:39	SC	XEN MID

Client Sample ID: SW-44

Date Collected: 12/15/21 11:30
Date Received: 12/21/21 08:35

Lab Sample ID: 880-9566-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	15273	12/21/21 14:23	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	15227	12/22/21 06:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			15716	12/29/21 09:36	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			15715	12/29/21 09:33	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	15385	12/22/21 14:29	DM	XEN MID
Total/NA	Analysis	8015B NM		1			15413	12/24/21 04:18	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	15219	12/21/21 09:00	CA	XEN MID
Soluble	Analysis	300.0		1			15393	12/22/21 07:25	SC	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Laboratory: Eurofins Xenco, Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc. Job ID: 880-9566-1
Project/Site: Mack PW SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-9566-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-9566-1	SW-6	Solid	12/15/21 10:22	12/21/21 08:35
880-9566-2	SW-7	Solid	12/15/21 10:29	12/21/21 08:35
880-9566-3	SW-25	Solid	12/15/21 11:03	12/21/21 08:35
880-9566-4	SW-30	Solid	12/15/21 11:09	12/21/21 08:35
880-9566-5	SW-44	Solid	12/15/21 11:30	12/21/21 08:35

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No. 2249

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld Ste 202
Midland TX 79701
432 687 0901

DATE 12/16/2021 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME MACK PW

LAI PROJECT # 21-0105-64 COLLECTOR DSG

Data Reported to

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State: MST / NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESSERVED	ANALYSES: BTEX ☒	MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐	TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐	HOLDPAH ☐	PAH 8270 ☐	8081 PESTICIDES ☐	8151 HERBICIDES ☐	8082 PCBS ☐	TCLP VOC ☐	TCLP - METALS (RCRA) ☐	TCLP - PEST ☐	HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐	D W 200.8 ☐	RCI ☐	TOX ☐	TCLP ☐	TDS ☐	TSS ☐	FLASHPOINT ☐	pH ☐	% MOISTURE ☐	HEXAVALENT CHROMIUM ☐	CYANIDE ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDE ☒	ANIONS ☐	ALKALINITY ☐	FIELD NOTES
SW-6		12/15/21	1022	S	1					X		X			X		X	X	X																							X				202
SW-7			1029																																											
SW-25			1103																																											
SW-30			1109																																											
SW-44			1130																																											

TOTAL 5

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	12/21/2021 0822	[signature]
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY: Xenco

880-9566 Chain of Custody

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 4/5 THERM#: IR2
CUSTODY SEALS - ☐ BROKEN ☒ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

FIELD NOTES: 202

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

12/29/2021

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-9566-1
SDG Number: 21-0105-04

Login Number: 9566
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Xenco, Midland

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

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-10254-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW Release

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
1/21/2022 4:17:43 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS
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Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Laboratory Job ID: 880-10254-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Job ID: 880-10254-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-10254-1

Receipt
The samples were received on 1/17/2022 8:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -1.4°C

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-17066 and analytical batch 880-17092 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28)

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-17134 and analytical batch 880-17181 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Client Sample ID: SW-2

Date Collected: 01/13/22 10:25
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 04:12	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 04:12	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 04:12	1
m,p-Xylenes	<0.00396	U	0.00396		mg/Kg		01/17/22 10:00	01/18/22 04:12	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 04:12	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/17/22 10:00	01/18/22 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/17/22 10:00*	*01/18/22 04:12*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*01/17/22 10:00*	*01/18/22 04:12*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		01/17/22 15:57	01/18/22 16:34	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/17/22 15:57	01/18/22 16:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/17/22 15:57	01/18/22 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*84*		*70 - 130*	*01/17/22 15:57*	*01/18/22 16:34*	*1*
o-Terphenyl (Surr)	*81*		*70 - 130*	*01/17/22 15:57*	*01/18/22 16:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**56.5**	**F1**	5.02		mg/Kg			01/19/22 11:46	1

Client Sample ID: SW-10

Date Collected: 01/13/22 10:45
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:32	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:32	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:32	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		01/17/22 10:00	01/18/22 04:32	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:32	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/17/22 10:00	01/18/22 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*01/17/22 10:00*	*01/18/22 04:32*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*01/17/22 10:00*	*01/18/22 04:32*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Client Sample ID: SW-10

Date Collected: 01/13/22 10:45
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-2
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		01/17/22 15:57	01/18/22 16:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 16:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*88*		*70 - 130*	*01/17/22 15:57*	*01/18/22 16:55*	*1*
o-Terphenyl (Surr)	*86*		*70 - 130*	*01/17/22 15:57*	*01/18/22 16:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2970**		25.0		mg/Kg			01/19/22 12:09	5

Client Sample ID: SW-28

Date Collected: 01/13/22 11:40
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:52	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		01/17/22 10:00	01/18/22 04:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/17/22 10:00	01/18/22 04:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/17/22 10:00	01/18/22 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*01/17/22 10:00*	*01/18/22 04:52*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*01/17/22 10:00*	*01/18/22 04:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U *1	49.9		mg/Kg		01/17/22 15:57	01/18/22 17:16	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/17/22 15:57	01/18/22 17:16	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: SW-28 Lab Sample ID: 880-10254-3

Date Collected: 01/13/22 11:40 **Matrix: Solid**
Date Received: 01/17/22 08:10

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/17/22 15:57	01/18/22 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*83*		*70 - 130*	*01/17/22 15:57*	*01/18/22 17:16*	*1*
o-Terphenyl (Surr)	*80*		*70 - 130*	*01/17/22 15:57*	*01/18/22 17:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**106**		4.95		mg/Kg			01/19/22 12:16	1

Client Sample ID: SW-20 Lab Sample ID: 880-10254-4

Date Collected: 01/13/22 11:20 **Matrix: Solid**
Date Received: 01/17/22 08:10

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 05:13	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 05:13	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 05:13	1
m,p-Xylenes	<0.00397	U	0.00397		mg/Kg		01/17/22 10:00	01/18/22 05:13	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/17/22 10:00	01/18/22 05:13	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/17/22 10:00	01/18/22 05:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*01/17/22 10:00*	*01/18/22 05:13*	*1*
1,4-Difluorobenzene (Surr)	*69*	*S1-*	*70 - 130*	*01/17/22 10:00*	*01/18/22 05:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		01/17/22 15:57	01/18/22 17:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 17:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*80*		*70 - 130*	*01/17/22 15:57*	*01/18/22 17:37*	*1*
o-Terphenyl (Surr)	*79*		*70 - 130*	*01/17/22 15:57*	*01/18/22 17:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1490**		4.97		mg/Kg			01/19/22 12:24	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Client Sample ID: SW-29

Date Collected: 01/13/22 11:45
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/17/22 10:00	01/18/22 05:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/17/22 10:00	01/18/22 05:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/17/22 10:00	01/18/22 05:33	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/17/22 10:00	01/18/22 05:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/17/22 10:00	01/18/22 05:33	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/17/22 10:00	01/18/22 05:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*01/17/22 10:00*	*01/18/22 05:33*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*01/17/22 10:00*	*01/18/22 05:33*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	50.0		mg/Kg		01/17/22 15:57	01/18/22 17:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 17:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*91*		*70 - 130*	*01/17/22 15:57*	*01/18/22 17:58*	*1*
o-Terphenyl (Surr)	*88*		*70 - 130*	*01/17/22 15:57*	*01/18/22 17:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**374**		5.04		mg/Kg			01/19/22 12:32	1

Client Sample ID: SW-41

Date Collected: 01/13/22 12:10
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:21	1
Toluene	<0.00199	U F2 F1	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:21	1
Ethylbenzene	<0.00199	U F1	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:21	1
m,p-Xylenes	<0.00398	U F1	0.00398		mg/Kg		01/19/22 11:00	01/21/22 13:21	1
o-Xylene	<0.00199	U F1	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:21	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		01/19/22 11:00	01/21/22 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*01/19/22 11:00*	*01/21/22 13:21*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*01/19/22 11:00*	*01/21/22 13:21*	*1*

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: SW-41 Lab Sample ID: 880-10254-6

Date Collected: 01/13/22 12:10 **Matrix: Solid**
Date Received: 01/17/22 08:10

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 19:53	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 19:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*66*	*S1-*	*70 - 130*	*01/17/22 09:12*	*01/17/22 19:53*	*1*
o-Terphenyl (Surr)	*67*	*S1-*	*70 - 130*	*01/17/22 09:12*	*01/17/22 19:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**307**		5.00		mg/Kg			01/19/22 12:54	1

Client Sample ID: SW-42 Lab Sample ID: 880-10254-7

Date Collected: 01/13/22 12:15 **Matrix: Solid**
Date Received: 01/17/22 08:10

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:49	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		01/19/22 11:00	01/21/22 13:49	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/19/22 11:00	01/21/22 13:49	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/19/22 11:00	01/21/22 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*141*	*S1+*	*70 - 130*	*01/19/22 11:00*	*01/21/22 13:49*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*01/19/22 11:00*	*01/21/22 13:49*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 20:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 20:14	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: SW-42 Lab Sample ID: 880-10254-7

Date Collected: 01/13/22 12:15 **Matrix: Solid**
Date Received: 01/17/22 08:10

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 20:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*67*	*S1-*	*70 - 130*	*01/17/22 09:12*	*01/17/22 20:14*	*1*
o-Terphenyl (Surr)	*65*	*S1-*	*70 - 130*	*01/17/22 09:12*	*01/17/22 20:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**80.5**		4.96		mg/Kg			01/19/22 13:02	1

Client Sample ID: SW-45 Lab Sample ID: 880-10254-8

Date Collected: 01/13/22 12:30 **Matrix: Solid**
Date Received: 01/17/22 08:10

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 14:17	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 14:17	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 14:17	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/19/22 11:00	01/21/22 14:17	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 14:17	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/22 11:00	01/21/22 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*	*01/19/22 11:00*	*01/21/22 14:17*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*01/19/22 11:00*	*01/21/22 14:17*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			01/20/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/20/22 15:36	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/17/22 09:12	01/17/22 20:35	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/17/22 09:12	01/17/22 20:35	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/17/22 09:12	01/17/22 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*69*	*S1-*	*70 - 130*	*01/17/22 09:12*	*01/17/22 20:35*	*1*
o-Terphenyl (Surr)	*70*		*70 - 130*	*01/17/22 09:12*	*01/17/22 20:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1590**		24.8		mg/Kg			01/19/22 13:09	5

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-10254-1	SW-2	102	68 S1-
880-10254-2	SW-10	106	90
880-10254-3	SW-28	68 S1-	115
880-10254-4	SW-20	111	69 S1-
880-10254-5	SW-29	106	75
880-10254-6	SW-41	102	88
880-10254-6 MS	SW-41	87	63 S1-
880-10254-6 MSD	SW-41	76	87
880-10254-7	SW-42	141 S1+	74
880-10254-8	SW-45	92	95
890-1829-A-11-B MS	Matrix Spike	750 S1+	27 S1-
890-1829-A-11-E MSD	Matrix Spike Duplicate	168 S1+	94
LCS 880-16969/1-A	Lab Control Sample	109	96
LCS 880-17113/1-A	Lab Control Sample	91	110
LCSD 880-16969/2-A	Lab Control Sample Dup	111	104
LCSD 880-17113/2-A	Lab Control Sample Dup	92	100
MB 880-16867/5-A	Method Blank	121	104
MB 880-16969/5-A	Method Blank	120	105
MB 880-17113/5-A	Method Blank	78	88

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-10254-1	SW-2	84	81
880-10254-2	SW-10	88	86
880-10254-3	SW-28	83	80
880-10254-4	SW-20	80	79
880-10254-5	SW-29	91	88
880-10254-6	SW-41	66 S1-	67 S1-
880-10254-7	SW-42	67 S1-	65 S1-
880-10254-8	SW-45	69 S1-	70
890-1829-A-1-H MS	Matrix Spike	77	73
890-1829-A-1-I MSD	Matrix Spike Duplicate	82	72
890-1830-A-1-E MS	Matrix Spike	67 S1-	60 S1-
890-1830-A-1-F MSD	Matrix Spike Duplicate	77	68 S1-
LCS 880-16978/2-A	Lab Control Sample	98	92
LCSD 880-16978/3-A	Lab Control Sample Dup	91	89
MB 880-16978/1-A	Method Blank	74	77

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	1CO2 (70-130)	OTPH2 (70-130)								
LCS 880-17066/2-A	Lab Control Sample	121	117								
LCSD 880-17066/3-A	Lab Control Sample Dup	101	99								
MB 880-17066/1-A	Method Blank	81	87								

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-16867/5-A
Matrix: Solid
Analysis Batch: 16967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16867

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/17/22 07:30	01/17/22 10:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/17/22 07:30	01/17/22 10:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/17/22 07:30	01/17/22 10:53	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/17/22 07:30	01/17/22 10:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/17/22 07:30	01/17/22 10:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/17/22 07:30	01/17/22 10:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*01/17/22 07:30*	*01/17/22 10:53*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*01/17/22 07:30*	*01/17/22 10:53*	*1*

Lab Sample ID: MB 880-16969/5-A
Matrix: Solid
Analysis Batch: 16967

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16969

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/17/22 08:51	01/17/22 22:29	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/17/22 08:51	01/17/22 22:29	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/17/22 08:51	01/17/22 22:29	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/17/22 08:51	01/17/22 22:29	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/17/22 08:51	01/17/22 22:29	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/17/22 08:51	01/17/22 22:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/17/22 08:51*	*01/17/22 22:29*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*01/17/22 08:51*	*01/17/22 22:29*	*1*

Lab Sample ID: LCS 880-16969/1-A
Matrix: Solid
Analysis Batch: 16967

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16969

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08505		mg/Kg		85	70 - 130		
Toluene			0.100	0.09888		mg/Kg		99	70 - 130		
Ethylbenzene			0.100	0.09639		mg/Kg		96	70 - 130		
m,p-Xylenes			0.200	0.1945		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09185		mg/Kg		92	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-16969/2-A
Matrix: Solid
Analysis Batch: 16967

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16969

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08828		mg/Kg		88	70 - 130	4	35

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-16969/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16967 **Prep Batch: 16969**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.09806		mg/Kg		98	70 - 130	1	35
Ethylbenzene			0.100	0.1036		mg/Kg		104	70 - 130	7	35
m,p-Xylenes			0.200	0.1962		mg/Kg		98	70 - 130	1	35
o-Xylene			0.100	0.09697		mg/Kg		97	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-1829-A-11-B MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16967 **Prep Batch: 16969**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F2 F1	0.0996	0.1386	F1	mg/Kg		139	70 - 130
Toluene	<0.00199	U	0.0996	0.07451		mg/Kg		75	70 - 130
Ethylbenzene	<0.00199	U F2 F1	0.0996	0.1329	F1	mg/Kg		133	70 - 130
m,p-Xylenes	<0.00398	U F2 F1	0.199	0.1695		mg/Kg		85	70 - 130
o-Xylene	<0.00199	U F2 F1	0.0996	0.2294	F1	mg/Kg		230	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*750*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*27*	*S1-*	*70 - 130*

Lab Sample ID: 890-1829-A-11-E MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16967 **Prep Batch: 16969**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F2 F1	0.0992	0.004455	F2 F1	mg/Kg		4	70 - 130	188	35
Toluene	<0.00199	U	0.0992	0.07334		mg/Kg		74	70 - 130	2	35
Ethylbenzene	<0.00199	U F2 F1	0.0992	0.05943	F2 F1	mg/Kg		60	70 - 130	76	35
m,p-Xylenes	<0.00398	U F2 F1	0.198	0.06036	F2 F1	mg/Kg		30	70 - 130	95	35
o-Xylene	<0.00199	U F2 F1	0.0992	0.06548	F2 F1	mg/Kg		66	70 - 130	111	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*168*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: MB 880-17113/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 17425 **Prep Batch: 17113**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 12:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 12:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 12:53	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/19/22 11:00	01/21/22 12:53	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-17113/5-A
Matrix: Solid
Analysis Batch: 17425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17113

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/19/22 11:00	01/21/22 12:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/19/22 11:00	01/21/22 12:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*	*01/19/22 11:00*	*01/21/22 12:53*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*01/19/22 11:00*	*01/21/22 12:53*	*1*

Lab Sample ID: LCS 880-17113/1-A
Matrix: Solid
Analysis Batch: 17425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17113

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1127		mg/Kg		113	70 - 130		
Toluene			0.100	0.09574		mg/Kg		96	70 - 130		
Ethylbenzene			0.100	0.09535		mg/Kg		95	70 - 130		
m,p-Xylenes			0.200	0.2108		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1114		mg/Kg		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: LCSD 880-17113/2-A
Matrix: Solid
Analysis Batch: 17425

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17113

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09102		mg/Kg		91	70 - 130	21	35
Toluene			0.100	0.07603		mg/Kg		76	70 - 130	23	35
Ethylbenzene			0.100	0.07455		mg/Kg		75	70 - 130	24	35
m,p-Xylenes			0.200	0.1629		mg/Kg		81	70 - 130	26	35
o-Xylene			0.100	0.08821		mg/Kg		88	70 - 130	23	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-10254-6 MS
Matrix: Solid
Analysis Batch: 17425

Client Sample ID: SW-41
Prep Type: Total/NA
Prep Batch: 17113

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U F1	0.0992	0.005473	F1	mg/Kg		6	70 - 130		
Toluene	<0.00199	U F2 F1	0.0992	0.003894	F1	mg/Kg		4	70 - 130		
Ethylbenzene	<0.00199	U F1	0.0992	0.005393	F1	mg/Kg		5	70 - 130		
m,p-Xylenes	<0.00398	U F1	0.198	0.01999	F1	mg/Kg		10	70 - 130		
o-Xylene	<0.00199	U F1	0.0992	0.01152	F1	mg/Kg		12	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

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

Lab Sample ID: 880-10254-6 MS
Matrix: Solid
Analysis Batch: 17425

Client Sample ID: SW-41
Prep Type: Total/NA
Prep Batch: 17113

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		70 - 130
1,4-Difluorobenzene (Surr)	63	S1-	70 - 130

Lab Sample ID: 880-10254-6 MSD
Matrix: Solid
Analysis Batch: 17425

Client Sample ID: SW-41
Prep Type: Total/NA
Prep Batch: 17113

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	0.005487	F1	mg/Kg		5	70 - 130	0	35
Toluene	<0.00199	U F2 F1	0.100	0.005737	F2 F1	mg/Kg		6	70 - 130	38	35
Ethylbenzene	<0.00199	U F1	0.100	0.005685	F1	mg/Kg		6	70 - 130	5	35
m,p-Xylenes	<0.00398	U F1	0.200	0.01657	F1	mg/Kg		8	70 - 130	19	35
o-Xylene	<0.00199	U F1	0.100	0.008377	F1	mg/Kg		8	70 - 130	32	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	76		70 - 130
1,4-Difluorobenzene (Surr)	87		70 - 130

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

Lab Sample ID: MB 880-16978/1-A
Matrix: Solid
Analysis Batch: 16964

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16978

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 11:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 11:45	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/22 09:12	01/17/22 11:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	74		70 - 130	01/17/22 09:12	01/17/22 11:45	1
o-Terphenyl (Surr)	77		70 - 130	01/17/22 09:12	01/17/22 11:45	1

Lab Sample ID: LCS 880-16978/2-A
Matrix: Solid
Analysis Batch: 16964

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16978

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1033		mg/Kg		103	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	878.7		mg/Kg		88	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	98		70 - 130
o-Terphenyl (Surr)	92		70 - 130

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-16978/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16964 **Prep Batch: 16978**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1022		mg/Kg		102	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	894.7		mg/Kg		89	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*91*		*70 - 130*
o-Terphenyl (Surr)	*89*		*70 - 130*

Lab Sample ID: 890-1830-A-1-E MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16964 **Prep Batch: 16978**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	999	1350	F1	mg/Kg		135	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	1144		mg/Kg		112	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*67*	*S1-*	*70 - 130*
o-Terphenyl (Surr)	*60*	*S1-*	*70 - 130*

Lab Sample ID: 890-1830-A-1-F MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16964 **Prep Batch: 16978**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1	998	1508	F1	mg/Kg		151	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1308		mg/Kg		129	70 - 130	13	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*77*		*70 - 130*
o-Terphenyl (Surr)	*68*	*S1-*	*70 - 130*

Lab Sample ID: MB 880-17066/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 17092 **Prep Batch: 17066**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 10:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 10:37	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/17/22 15:57	01/18/22 10:37	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-17066/1-A
Matrix: Solid
Analysis Batch: 17092

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17066

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	81		70 - 130	01/17/22 15:57	01/18/22 10:37	1
o-Terphenyl (Surr)	87		70 - 130	01/17/22 15:57	01/18/22 10:37	1

Lab Sample ID: LCS 880-17066/2-A
Matrix: Solid
Analysis Batch: 17092

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17066

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	911.5		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1194		mg/Kg		119	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	121		70 - 130
o-Terphenyl (Surr)	117		70 - 130

Lab Sample ID: LCSD 880-17066/3-A
Matrix: Solid
Analysis Batch: 17092

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17066

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	709.9	*1	mg/Kg		71	70 - 130	25	20
Diesel Range Organics (Over C10-C28)			1000	1042		mg/Kg		104	70 - 130	14	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	101		70 - 130
o-Terphenyl (Surr)	99		70 - 130

Lab Sample ID: 890-1829-A-1-H MS
Matrix: Solid
Analysis Batch: 17092

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 17066

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	999	885.7		mg/Kg		86	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	999	1011		mg/Kg		101	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane (Surr)	77		70 - 130
o-Terphenyl (Surr)	73		70 - 130

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Lab Sample ID: 890-1829-A-1-I MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 17092 **Prep Batch: 17066**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U *1	998	907.6		mg/Kg		88	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	999.8		mg/Kg		100	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*82*		*70 - 130*
o-Terphenyl (Surr)	*72*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-17134/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 17181

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/19/22 11:24	1

Lab Sample ID: LCS 880-17134/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 17181

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	267.5		mg/Kg		107	90 - 110		

Lab Sample ID: LCSD 880-17134/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 17181

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	266.2		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 880-10254-1 MS **Client Sample ID: SW-2**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 17181

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	56.5	F1	251	381.4	F1	mg/Kg		129	90 - 110		

Lab Sample ID: 880-10254-1 MSD **Client Sample ID: SW-2**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 17181

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	56.5	F1	251	359.6	F1	mg/Kg		121	90 - 110	6	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

GC VOA

Prep Batch: 16867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-16867/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 16967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Total/NA	Solid	8021B	16969
880-10254-2	SW-10	Total/NA	Solid	8021B	16969
880-10254-3	SW-28	Total/NA	Solid	8021B	16969
880-10254-4	SW-20	Total/NA	Solid	8021B	16969
880-10254-5	SW-29	Total/NA	Solid	8021B	16969
MB 880-16867/5-A	Method Blank	Total/NA	Solid	8021B	16867
MB 880-16969/5-A	Method Blank	Total/NA	Solid	8021B	16969
LCS 880-16969/1-A	Lab Control Sample	Total/NA	Solid	8021B	16969
LCSD 880-16969/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16969
890-1829-A-11-B MS	Matrix Spike	Total/NA	Solid	8021B	16969
890-1829-A-11-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16969

Prep Batch: 16969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Total/NA	Solid	5035	
880-10254-2	SW-10	Total/NA	Solid	5035	
880-10254-3	SW-28	Total/NA	Solid	5035	
880-10254-4	SW-20	Total/NA	Solid	5035	
880-10254-5	SW-29	Total/NA	Solid	5035	
MB 880-16969/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16969/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16969/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1829-A-11-B MS	Matrix Spike	Total/NA	Solid	5035	
890-1829-A-11-E MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 17113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-6	SW-41	Total/NA	Solid	5035	
880-10254-7	SW-42	Total/NA	Solid	5035	
880-10254-8	SW-45	Total/NA	Solid	5035	
MB 880-17113/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-17113/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-17113/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-10254-6 MS	SW-41	Total/NA	Solid	5035	
880-10254-6 MSD	SW-41	Total/NA	Solid	5035	

Analysis Batch: 17403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Total/NA	Solid	Total BTEX	
880-10254-2	SW-10	Total/NA	Solid	Total BTEX	
880-10254-3	SW-28	Total/NA	Solid	Total BTEX	
880-10254-4	SW-20	Total/NA	Solid	Total BTEX	
880-10254-5	SW-29	Total/NA	Solid	Total BTEX	
880-10254-6	SW-41	Total/NA	Solid	Total BTEX	
880-10254-7	SW-42	Total/NA	Solid	Total BTEX	
880-10254-8	SW-45	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

GC VOA

Analysis Batch: 17425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-6	SW-41	Total/NA	Solid	8021B	17113
880-10254-7	SW-42	Total/NA	Solid	8021B	17113
880-10254-8	SW-45	Total/NA	Solid	8021B	17113
MB 880-17113/5-A	Method Blank	Total/NA	Solid	8021B	17113
LCS 880-17113/1-A	Lab Control Sample	Total/NA	Solid	8021B	17113
LCSD 880-17113/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	17113
880-10254-6 MS	SW-41	Total/NA	Solid	8021B	17113
880-10254-6 MSD	SW-41	Total/NA	Solid	8021B	17113

GC Semi VOA

Analysis Batch: 16964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-6	SW-41	Total/NA	Solid	8015B NM	16978
880-10254-7	SW-42	Total/NA	Solid	8015B NM	16978
880-10254-8	SW-45	Total/NA	Solid	8015B NM	16978
MB 880-16978/1-A	Method Blank	Total/NA	Solid	8015B NM	16978
LCS 880-16978/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16978
LCSD 880-16978/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16978
890-1830-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	16978
890-1830-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	16978

Prep Batch: 16978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-6	SW-41	Total/NA	Solid	8015NM Prep	
880-10254-7	SW-42	Total/NA	Solid	8015NM Prep	
880-10254-8	SW-45	Total/NA	Solid	8015NM Prep	
MB 880-16978/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16978/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16978/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1830-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1830-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 17066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Total/NA	Solid	8015NM Prep	
880-10254-2	SW-10	Total/NA	Solid	8015NM Prep	
880-10254-3	SW-28	Total/NA	Solid	8015NM Prep	
880-10254-4	SW-20	Total/NA	Solid	8015NM Prep	
880-10254-5	SW-29	Total/NA	Solid	8015NM Prep	
MB 880-17066/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-17066/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-17066/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1829-A-1-H MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1829-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 17092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Total/NA	Solid	8015B NM	17066
880-10254-2	SW-10	Total/NA	Solid	8015B NM	17066
880-10254-3	SW-28	Total/NA	Solid	8015B NM	17066

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

GC Semi VOA (Continued)

Analysis Batch: 17092 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-4	SW-20	Total/NA	Solid	8015B NM	17066
880-10254-5	SW-29	Total/NA	Solid	8015B NM	17066
MB 880-17066/1-A	Method Blank	Total/NA	Solid	8015B NM	17066
LCS 880-17066/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	17066
LCSD 880-17066/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	17066
890-1829-A-1-H MS	Matrix Spike	Total/NA	Solid	8015B NM	17066
890-1829-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	17066

Analysis Batch: 17383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Total/NA	Solid	8015 NM	
880-10254-2	SW-10	Total/NA	Solid	8015 NM	
880-10254-3	SW-28	Total/NA	Solid	8015 NM	
880-10254-4	SW-20	Total/NA	Solid	8015 NM	
880-10254-5	SW-29	Total/NA	Solid	8015 NM	
880-10254-6	SW-41	Total/NA	Solid	8015 NM	
880-10254-7	SW-42	Total/NA	Solid	8015 NM	
880-10254-8	SW-45	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 17134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Soluble	Solid	DI Leach	
880-10254-2	SW-10	Soluble	Solid	DI Leach	
880-10254-3	SW-28	Soluble	Solid	DI Leach	
880-10254-4	SW-20	Soluble	Solid	DI Leach	
880-10254-5	SW-29	Soluble	Solid	DI Leach	
880-10254-6	SW-41	Soluble	Solid	DI Leach	
880-10254-7	SW-42	Soluble	Solid	DI Leach	
880-10254-8	SW-45	Soluble	Solid	DI Leach	
MB 880-17134/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-17134/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-17134/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-10254-1 MS	SW-2	Soluble	Solid	DI Leach	
880-10254-1 MSD	SW-2	Soluble	Solid	DI Leach	

Analysis Batch: 17181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1	SW-2	Soluble	Solid	300.0	17134
880-10254-2	SW-10	Soluble	Solid	300.0	17134
880-10254-3	SW-28	Soluble	Solid	300.0	17134
880-10254-4	SW-20	Soluble	Solid	300.0	17134
880-10254-5	SW-29	Soluble	Solid	300.0	17134
880-10254-6	SW-41	Soluble	Solid	300.0	17134
880-10254-7	SW-42	Soluble	Solid	300.0	17134
880-10254-8	SW-45	Soluble	Solid	300.0	17134
MB 880-17134/1-A	Method Blank	Soluble	Solid	300.0	17134
LCS 880-17134/2-A	Lab Control Sample	Soluble	Solid	300.0	17134
LCSD 880-17134/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	17134
880-10254-1 MS	SW-2	Soluble	Solid	300.0	17134

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

HPLC/IC (Continued)

Analysis Batch: 17181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10254-1 MSD	SW-2	Soluble	Solid	300.0	17134

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Client Sample ID: SW-2

Lab Sample ID: 880-10254-1
Matrix: Solid
Date Collected: 01/13/22 10:25
Date Received: 01/17/22 08:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	16969	01/17/22 10:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16967	01/18/22 04:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	17066	01/17/22 15:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			17092	01/18/22 16:34	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		1			17181	01/19/22 11:46	CH	XEN MID

Client Sample ID: SW-10

Lab Sample ID: 880-10254-2
Matrix: Solid
Date Collected: 01/13/22 10:45
Date Received: 01/17/22 08:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	16969	01/17/22 10:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16967	01/18/22 04:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	17066	01/17/22 15:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			17092	01/18/22 16:55	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		5			17181	01/19/22 12:09	CH	XEN MID

Client Sample ID: SW-28

Lab Sample ID: 880-10254-3
Matrix: Solid
Date Collected: 01/13/22 11:40
Date Received: 01/17/22 08:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	16969	01/17/22 10:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16967	01/18/22 04:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	17066	01/17/22 15:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			17092	01/18/22 17:16	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		1			17181	01/19/22 12:16	CH	XEN MID

Client Sample ID: SW-20

Lab Sample ID: 880-10254-4
Matrix: Solid
Date Collected: 01/13/22 11:20
Date Received: 01/17/22 08:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	16969	01/17/22 10:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16967	01/18/22 05:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Client Sample ID: SW-20

Date Collected: 01/13/22 11:20
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	17066	01/17/22 15:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			17092	01/18/22 17:37	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		1			17181	01/19/22 12:24	CH	XEN MID

Client Sample ID: SW-29

Date Collected: 01/13/22 11:45
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16969	01/17/22 10:00	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16967	01/18/22 05:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	17066	01/17/22 15:57	DM	XEN MID
Total/NA	Analysis	8015B NM		1			17092	01/18/22 17:58	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		1			17181	01/19/22 12:32	CH	XEN MID

Client Sample ID: SW-41

Date Collected: 01/13/22 12:10
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	17113	01/19/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	17425	01/21/22 13:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16964	01/17/22 19:53	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		1			17181	01/19/22 12:54	CH	XEN MID

Client Sample ID: SW-42

Date Collected: 01/13/22 12:15
Date Received: 01/17/22 08:10

Lab Sample ID: 880-10254-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	17113	01/19/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	17425	01/21/22 13:49	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16964	01/17/22 20:14	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Client Sample ID: SW-42

Lab Sample ID: 880-10254-7
Matrix: Solid
Date Collected: 01/13/22 12:15
Date Received: 01/17/22 08:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		1			17181	01/19/22 13:02	CH	XEN MID

Client Sample ID: SW-45

Lab Sample ID: 880-10254-8
Matrix: Solid
Date Collected: 01/13/22 12:30
Date Received: 01/17/22 08:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	17113	01/19/22 11:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	17425	01/21/22 14:17	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			17403	01/20/22 16:12	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			17383	01/20/22 15:36	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16978	01/17/22 09:12	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16964	01/17/22 20:35	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	17134	01/18/22 11:23	CH	XEN MID
Soluble	Analysis	300.0		5			17181	01/19/22 13:09	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc. Job ID: 880-10254-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-10254-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-10254-1	SW-2	Solid	01/13/22 10:25	01/17/22 08:10
880-10254-2	SW-10	Solid	01/13/22 10:45	01/17/22 08:10
880-10254-3	SW-28	Solid	01/13/22 11:40	01/17/22 08:10
880-10254-4	SW-20	Solid	01/13/22 11:20	01/17/22 08:10
880-10254-5	SW-29	Solid	01/13/22 11:45	01/17/22 08:10
880-10254-6	SW-41	Solid	01/13/22 12:10	01/17/22 08:10
880-10254-7	SW-42	Solid	01/13/22 12:15	01/17/22 08:10
880-10254-8	SW-45	Solid	01/13/22 12:30	01/17/22 08:10

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No. 2307

10254

CHAIN-OF-CUSTODY

1/21/2022

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld Ste 202
Midland TX 79701
432 687 0901

Data Reported to

DATE 1117/2022 PAGE 1 OF 1

PO# _____ LAB WORK ORDER# _____

PROJECT LOCATION OR NAME Mack Pan Release

LAI PROJECT # 21-0105-04 COLLECTOR JR

TRRP report? ☐ Yes ☒ No

TIME ZONE
Time zone/State: MST/NM

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl | HNO_3 | H_2SO_4 | NaOH | ICE | UNPRESERVED

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESERVED	BTEX 8021	MTBE	TRPH 418.1	TPH 1005	TPH 1006	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	VOC 8260	SVOC 8270	PAH 8270	HOLDPAH	8081 PESTICIDES	8151 HERBICIDES	8082 PCBS	TCLP - METALS (RCRA)	TCLP VOC	TCLP - PEST	HERB	Semi-VOC	TOTAL METALS (RCRA)	OTHER LIST	LEAD - TOTAL	D W 200.8	TCLP	RCI	TOX	FLASHPOINT	TDS	TSS	% MOISTURE	pH	HEXAVALENT CHROMIUM	CYANIDE	EXPLOSIVES	PECHLORATE	CHLORIDES	ANIONS	ALKALINITY	FIELD NOTES
SW-2		1113/22	1025	S	1					X		X		X	X		X	X	X																										X					
SW-10			1045																																															
SW-28			1140																																															
SW-20			1120																																															
SW-29			1145																																															
SW-41			1210																																															
SW-42			1215																																															
SW-45			1230																																															
TOTAL																																																	

880-10254 Chain of Custody

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	1117/22 0806	[signature]
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY Xenco

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP -1.3 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☑ HAND DELIVERED

Page 30 of 31

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-10254-1
SDG Number: 21-0105-04

Login Number: 10254
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Midland

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

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-10926-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
2/14/2022 10:38:10 AM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

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Visit us at:
www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Laboratory Job ID: 880-10926-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Job ID: 880-10926-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-10926-1

Receipt
The samples were received on 2/4/2022 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.7°C

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SW 19 (880-10926-8), SW 43 (880-10926-9) and SW 45 (880-10926-10). Evidence of matrix interferences is not obvious.

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-18572 and analytical batch 880-18733 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-18571 and analytical batch 880-18734 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 6

Date Collected: 02/01/22 09:25
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-1
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 13:52	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 13:52	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 13:52	1
m,p-Xylenes	<0.00403	U	0.00403		mg/Kg		02/07/22 08:15	02/07/22 13:52	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 13:52	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/07/22 08:15	02/07/22 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*	*02/07/22 08:15*	*02/07/22 13:52*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*02/07/22 08:15*	*02/07/22 13:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/05/22 23:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/05/22 23:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/05/22 23:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*98*		*70 - 130*	*02/04/22 13:33*	*02/05/22 23:54*	*1*
o-Terphenyl (Surr)	*101*		*70 - 130*	*02/04/22 13:33*	*02/05/22 23:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**741**		4.99		mg/Kg			02/11/22 23:46	1

Client Sample ID: SW 5

Date Collected: 02/01/22 10:05
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-2
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 14:12	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 14:12	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 14:12	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		02/07/22 08:15	02/07/22 14:12	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 14:12	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/07/22 08:15	02/07/22 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*02/07/22 08:15*	*02/07/22 14:12*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*02/07/22 08:15*	*02/07/22 14:12*	*1*

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SW 5

Lab Sample ID: 880-10926-2
Date Collected: 02/01/22 10:05 **Matrix: Solid**
Date Received: 02/04/22 10:15

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*107*		*70 - 130*	*02/04/22 13:33*	*02/06/22 00:15*	*1*
o-Terphenyl (Surr)	*111*		*70 - 130*	*02/04/22 13:33*	*02/06/22 00:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**740**		4.95		mg/Kg			02/11/22 23:55	1

Client Sample ID: SW 8

Lab Sample ID: 880-10926-3
Date Collected: 02/01/22 12:15 **Matrix: Solid**
Date Received: 02/04/22 10:15

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 14:33	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 14:33	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 14:33	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/07/22 08:15	02/07/22 14:33	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 14:33	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/07/22 08:15	02/07/22 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/07/22 08:15*	*02/07/22 14:33*	*1*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*	*02/07/22 08:15*	*02/07/22 14:33*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:36	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 8

Lab Sample ID: 880-10926-3
Matrix: Solid
Date Collected: 02/01/22 12:15
Date Received: 02/04/22 10:15

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*94*		*70 - 130*	*02/04/22 13:33*	*02/06/22 00:36*	*1*
o-Terphenyl (Surr)	*94*		*70 - 130*	*02/04/22 13:33*	*02/06/22 00:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**367**		5.00		mg/Kg			02/12/22 00:05	1

Client Sample ID: SW 10

Lab Sample ID: 880-10926-4
Matrix: Solid
Date Collected: 02/01/22 10:45
Date Received: 02/04/22 10:15

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 14:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 14:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 14:53	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/07/22 08:15	02/07/22 14:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 14:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/07/22 08:15	02/07/22 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*	*02/07/22 08:15*	*02/07/22 14:53*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*02/07/22 08:15*	*02/07/22 14:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:56	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:56	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/04/22 13:33	02/06/22 00:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*99*		*70 - 130*	*02/04/22 13:33*	*02/06/22 00:56*	*1*
o-Terphenyl (Surr)	*106*		*70 - 130*	*02/04/22 13:33*	*02/06/22 00:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.6**		4.96		mg/Kg			02/09/22 23:50	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 11

Date Collected: 02/02/22 09:00
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 15:14	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 15:14	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 15:14	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/07/22 08:15	02/07/22 15:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 15:14	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/07/22 08:15	02/07/22 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*131*	*S1+*	*70 - 130*	*02/07/22 08:15*	*02/07/22 15:14*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*02/07/22 08:15*	*02/07/22 15:14*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/06/22 01:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/06/22 01:17	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/06/22 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*94*		*70 - 130*	*02/04/22 13:33*	*02/06/22 01:17*	*1*
o-Terphenyl (Surr)	*99*		*70 - 130*	*02/04/22 13:33*	*02/06/22 01:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**730**		4.95		mg/Kg			02/09/22 23:55	1

Client Sample ID: SW 12

Date Collected: 02/01/22 14:15
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 15:34	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 15:34	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 15:34	1
m,p-Xylenes	<0.00403	U	0.00403		mg/Kg		02/07/22 08:15	02/07/22 15:34	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/07/22 08:15	02/07/22 15:34	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/07/22 08:15	02/07/22 15:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*02/07/22 08:15*	*02/07/22 15:34*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*02/07/22 08:15*	*02/07/22 15:34*	*1*

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SW 12 Lab Sample ID: 880-10926-6

Date Collected: 02/01/22 14:15 **Matrix: Solid**
Date Received: 02/04/22 10:15

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/06/22 01:37	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/06/22 01:37	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/04/22 13:33	02/06/22 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*81*		*70 - 130*	*02/04/22 13:33*	*02/06/22 01:37*	*1*
o-Terphenyl (Surr)	*86*		*70 - 130*	*02/04/22 13:33*	*02/06/22 01:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**268**		5.01		mg/Kg			02/09/22 23:59	1

Client Sample ID: SW 17 Lab Sample ID: 880-10926-7

Date Collected: 02/02/22 12:30 **Matrix: Solid**
Date Received: 02/04/22 10:15

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 17:24	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 17:24	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 17:24	1
m,p-Xylenes	<0.00396	U	0.00396		mg/Kg		02/07/22 08:15	02/07/22 17:24	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 17:24	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/07/22 08:15	02/07/22 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*	*S1+*	*70 - 130*	*02/07/22 08:15*	*02/07/22 17:24*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/07/22 08:15*	*02/07/22 17:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/04/22 16:00	02/07/22 00:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/04/22 16:00	02/07/22 00:16	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SW 17 Lab Sample ID: 880-10926-7

Date Collected: 02/02/22 12:30 **Matrix: Solid**
Date Received: 02/04/22 10:15

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/04/22 16:00	02/07/22 00:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*75*		*70 - 130*	*02/04/22 16:00*	*02/07/22 00:16*	*1*
o-Terphenyl (Surr)	*85*		*70 - 130*	*02/04/22 16:00*	*02/07/22 00:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1120**		4.98		mg/Kg			02/10/22 00:04	1

Client Sample ID: SW 19 Lab Sample ID: 880-10926-8

Date Collected: 02/02/22 11:45 **Matrix: Solid**
Date Received: 02/04/22 10:15

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 17:44	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 17:44	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 17:44	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		02/07/22 08:15	02/07/22 17:44	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 17:44	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/07/22 08:15	02/07/22 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*143*	*S1+*	*70 - 130*	*02/07/22 08:15*	*02/07/22 17:44*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*02/07/22 08:15*	*02/07/22 17:44*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/04/22 16:00	02/07/22 01:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/04/22 16:00	02/07/22 01:15	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/04/22 16:00	02/07/22 01:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*0*	*S1-*	*70 - 130*	*02/04/22 16:00*	*02/07/22 01:15*	*1*
o-Terphenyl (Surr)	*0*	*S1-*	*70 - 130*	*02/04/22 16:00*	*02/07/22 01:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1250**		5.05		mg/Kg			02/10/22 00:09	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 43

Date Collected: 02/01/22 13:20
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-9
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 18:04	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 18:04	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 18:04	1
m,p-Xylenes	<0.00396	U	0.00396		mg/Kg		02/07/22 08:15	02/07/22 18:04	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/07/22 08:15	02/07/22 18:04	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/07/22 08:15	02/07/22 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*02/07/22 08:15*	*02/07/22 18:04*	*1*
1,4-Difluorobenzene (Surr)	*74*		*70 - 130*	*02/07/22 08:15*	*02/07/22 18:04*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/04/22 16:00	02/07/22 01:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/04/22 16:00	02/07/22 01:36	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/04/22 16:00	02/07/22 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*0*	*S1-*	*70 - 130*	*02/04/22 16:00*	*02/07/22 01:36*	*1*
o-Terphenyl (Surr)	*0*	*S1-*	*70 - 130*	*02/04/22 16:00*	*02/07/22 01:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**676**		4.97		mg/Kg			02/10/22 00:14	1

Client Sample ID: SW 45

Date Collected: 02/01/22 12:00
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-10
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 18:25	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 18:25	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 18:25	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/07/22 08:15	02/07/22 18:25	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/07/22 08:15	02/07/22 18:25	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/07/22 08:15	02/07/22 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*132*	*S1+*	*70 - 130*	*02/07/22 08:15*	*02/07/22 18:25*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/07/22 08:15*	*02/07/22 18:25*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 45

Date Collected: 02/01/22 12:00
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-10

Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/10/22 10:09	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/10/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/04/22 16:00	02/07/22 01:56	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/04/22 16:00	02/07/22 01:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/04/22 16:00	02/07/22 01:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*0*	*S1-*	*70 - 130*	*02/04/22 16:00*	*02/07/22 01:56*	*1*
o-Terphenyl (Surr)	*0*	*S1-*	*70 - 130*	*02/04/22 16:00*	*02/07/22 01:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**476**		4.98		mg/Kg			02/10/22 00:19	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-10926-1	SW 6	140 S1+	99
880-10926-2	SW 5	86	97
880-10926-3	SW 8	105	71
880-10926-4	SW 10	123	84
880-10926-5	SW 11	131 S1+	84
880-10926-6	SW 12	134 S1+	101
880-10926-7	SW 17	144 S1+	96
880-10926-8	SW 19	143 S1+	91
880-10926-9	SW 43	96	74
880-10926-10	SW 45	132 S1+	96
890-1910-A-10-C MSD	Matrix Spike Duplicate	140 S1+	110
890-1910-A-10-E MS	Matrix Spike	139 S1+	93
LCS 880-18657/1-A	Lab Control Sample	123	103
LCSD 880-18657/2-A	Lab Control Sample Dup	124	100
MB 880-18657/5-A	Method Blank	128	110

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-10912-A-21-C MS	Matrix Spike	82	83
880-10912-A-21-D MSD	Matrix Spike Duplicate	75	75
880-10926-1	SW 6	98	101
880-10926-2	SW 5	107	111
880-10926-3	SW 8	94	94
880-10926-4	SW 10	99	106
880-10926-5	SW 11	94	99
880-10926-6	SW 12	81	86
880-10926-7	SW 17	75	85
880-10926-7 MS	SW 17	76	78
880-10926-7 MSD	SW 17	78	81
880-10926-8	SW 19	0 S1-	0 S1-
880-10926-9	SW 43	0 S1-	0 S1-
880-10926-10	SW 45	0 S1-	0 S1-
LCS 880-18603/2-A	Lab Control Sample	95	103
LCSD 880-18603/3-A	Lab Control Sample Dup	92	99
MB 880-18603/1-A	Method Blank	84	98

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		1CO2	OTPH2								
Lab Sample ID	Client Sample ID	(70-130)	(70-130)								
LCS 880-18594/2-A	Lab Control Sample	93	88								
LCSD 880-18594/3-A	Lab Control Sample Dup	100	103								
MB 880-18594/1-A	Method Blank	102	107								

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-18657/5-A
Matrix: Solid
Analysis Batch: 18659

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18657

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 12:01	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 12:01	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 12:01	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/07/22 08:15	02/07/22 12:01	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/07/22 08:15	02/07/22 12:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/07/22 08:15	02/07/22 12:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*70 - 130*	*02/07/22 08:15*	*02/07/22 12:01*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*02/07/22 08:15*	*02/07/22 12:01*	*1*

Lab Sample ID: LCS 880-18657/1-A
Matrix: Solid
Analysis Batch: 18659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18657

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.07587		mg/Kg		76	70 - 130		
Toluene			0.100	0.08392		mg/Kg		84	70 - 130		
Ethylbenzene			0.100	0.09640		mg/Kg		96	70 - 130		
m,p-Xylenes			0.200	0.1819		mg/Kg		91	70 - 130		
o-Xylene			0.100	0.09696		mg/Kg		97	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-18657/2-A
Matrix: Solid
Analysis Batch: 18659

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18657

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07304		mg/Kg		73	70 - 130	4	35
Toluene			0.100	0.08124		mg/Kg		81	70 - 130	3	35
Ethylbenzene			0.100	0.08880		mg/Kg		89	70 - 130	8	35
m,p-Xylenes			0.200	0.1751		mg/Kg		88	70 - 130	4	35
o-Xylene			0.100	0.08907		mg/Kg		89	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 890-1910-A-10-C MSD
Matrix: Solid
Analysis Batch: 18659

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18657

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.100	0.09411		mg/Kg		94	70 - 130	19	35
Toluene	<0.00199	U	0.100	0.09612		mg/Kg		96	70 - 130	10	35

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

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

Lab Sample ID: 890-1910-A-10-C MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18659 **Prep Batch: 18657**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00199	U	0.100	0.1029		mg/Kg		103	70 - 130	6	35
m,p-Xylenes	<0.00398	U	0.200	0.2009		mg/Kg		100	70 - 130	5	35
o-Xylene	<0.00199	U	0.100	0.09738		mg/Kg		97	70 - 130	13	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*140*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 890-1910-A-10-E MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18659 **Prep Batch: 18657**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U	0.0996	0.07755		mg/Kg		78	70 - 130
Toluene	<0.00199	U	0.0996	0.08692		mg/Kg		87	70 - 130
Ethylbenzene	<0.00199	U	0.0996	0.09708		mg/Kg		97	70 - 130
m,p-Xylenes	<0.00398	U	0.199	0.1919		mg/Kg		96	70 - 130
o-Xylene	<0.00199	U	0.0996	0.08557		mg/Kg		86	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*139*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

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

Lab Sample ID: MB 880-18594/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18620 **Prep Batch: 18594**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		02/04/22 13:33	02/05/22 21:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		02/04/22 13:33	02/05/22 21:26	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		02/04/22 13:33	02/05/22 21:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*02/04/22 13:33*	*02/05/22 21:26*	*1*
o-Terphenyl (Surr)	*107*		*70 - 130*	*02/04/22 13:33*	*02/05/22 21:26*	*1*

Lab Sample ID: LCS 880-18594/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 18620 **Prep Batch: 18594**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1110		mg/Kg		111	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1191		mg/Kg		119	70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

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

Lab Sample ID: LCS 880-18594/2-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18594

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	93		70 - 130
o-Terphenyl (Surr)	88		70 - 130

Lab Sample ID: LCSD 880-18594/3-A
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18594

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1103		mg/Kg		110	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1159		mg/Kg		116	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	100		70 - 130
o-Terphenyl (Surr)	103		70 - 130

Lab Sample ID: 880-10912-A-21-C MS
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 18594

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1126		mg/Kg		110	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1084		mg/Kg		108	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane (Surr)	82		70 - 130
o-Terphenyl (Surr)	83		70 - 130

Lab Sample ID: 880-10912-A-21-D MSD
Matrix: Solid
Analysis Batch: 18620

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 18594

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1063		mg/Kg		104	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	954.0		mg/Kg		96	70 - 130	13	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane (Surr)	75		70 - 130
o-Terphenyl (Surr)	75		70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-18603/1-A
Matrix: Solid
Analysis Batch: 18649

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 18603

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/04/22 14:40	02/06/22 23:15	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/04/22 14:40	02/06/22 23:15	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/04/22 14:40	02/06/22 23:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*84*		*70 - 130*	*02/04/22 14:40*	*02/06/22 23:15*	*1*
o-Terphenyl (Surr)	*98*		*70 - 130*	*02/04/22 14:40*	*02/06/22 23:15*	*1*

Lab Sample ID: LCS 880-18603/2-A
Matrix: Solid
Analysis Batch: 18649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 18603

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	827.6		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1127		mg/Kg		113	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*95*		*70 - 130*
o-Terphenyl (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-18603/3-A
Matrix: Solid
Analysis Batch: 18649

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 18603

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	834.3		mg/Kg		83	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	1160		mg/Kg		116	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*92*		*70 - 130*
o-Terphenyl (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-10926-7 MS
Matrix: Solid
Analysis Batch: 18649

Client Sample ID: SW 17
Prep Type: Total/NA
Prep Batch: 18603

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	788.1		mg/Kg		76	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	882.1		mg/Kg		86	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

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

Lab Sample ID: 880-10926-7 MS
Matrix: Solid
Analysis Batch: 18649

Client Sample ID: SW 17
Prep Type: Total/NA
Prep Batch: 18603

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane (Surr)	*76*		*70 - 130*
o-Terphenyl (Surr)	*78*		*70 - 130*

Lab Sample ID: 880-10926-7 MSD
Matrix: Solid
Analysis Batch: 18649

Client Sample ID: SW 17
Prep Type: Total/NA
Prep Batch: 18603

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	813.1		mg/Kg		79	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	921.8		mg/Kg		90	70 - 130	4	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane (Surr)	*78*		*70 - 130*
o-Terphenyl (Surr)	*81*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-18572/1-A
Matrix: Solid
Analysis Batch: 18733

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/09/22 21:53	1

Lab Sample ID: LCS 880-18572/2-A
Matrix: Solid
Analysis Batch: 18733

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	253.8		mg/Kg		102	90 - 110		

Lab Sample ID: LCSD 880-18572/3-A
Matrix: Solid
Analysis Batch: 18733

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	251.1		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 880-10893-A-11-D MS
Matrix: Solid
Analysis Batch: 18733

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	278	F1	250	501.8	F1	mg/Kg		89	90 - 110		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 880-10893-A-11-E MSD
Matrix: Solid
Analysis Batch: 18733

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	278	F1	250	508.2		mg/Kg		92	90 - 110	1	20

Lab Sample ID: MB 880-18571/1-A
Matrix: Solid
Analysis Batch: 18734

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/11/22 19:24	1

Lab Sample ID: LCS 880-18571/2-A
Matrix: Solid
Analysis Batch: 18734

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	272.5		mg/Kg		109	90 - 110		

Lab Sample ID: LCSD 880-18571/3-A
Matrix: Solid
Analysis Batch: 18734

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	270.5		mg/Kg		108	90 - 110	1	20

Lab Sample ID: 880-10920-A-8-B MS
Matrix: Solid
Analysis Batch: 18734

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	46.1	F1	250	326.8	F1	mg/Kg		112	90 - 110		

Lab Sample ID: 880-10920-A-8-C MSD
Matrix: Solid
Analysis Batch: 18734

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	46.1	F1	250	327.4	F1	mg/Kg		113	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

GC VOA

Prep Batch: 18657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Total/NA	Solid	5035	
880-10926-2	SW 5	Total/NA	Solid	5035	
880-10926-3	SW 8	Total/NA	Solid	5035	
880-10926-4	SW 10	Total/NA	Solid	5035	
880-10926-5	SW 11	Total/NA	Solid	5035	
880-10926-6	SW 12	Total/NA	Solid	5035	
880-10926-7	SW 17	Total/NA	Solid	5035	
880-10926-8	SW 19	Total/NA	Solid	5035	
880-10926-9	SW 43	Total/NA	Solid	5035	
880-10926-10	SW 45	Total/NA	Solid	5035	
MB 880-18657/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-18657/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-18657/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-1910-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
890-1910-A-10-E MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 18659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Total/NA	Solid	8021B	18657
880-10926-2	SW 5	Total/NA	Solid	8021B	18657
880-10926-3	SW 8	Total/NA	Solid	8021B	18657
880-10926-4	SW 10	Total/NA	Solid	8021B	18657
880-10926-5	SW 11	Total/NA	Solid	8021B	18657
880-10926-6	SW 12	Total/NA	Solid	8021B	18657
880-10926-7	SW 17	Total/NA	Solid	8021B	18657
880-10926-8	SW 19	Total/NA	Solid	8021B	18657
880-10926-9	SW 43	Total/NA	Solid	8021B	18657
880-10926-10	SW 45	Total/NA	Solid	8021B	18657
MB 880-18657/5-A	Method Blank	Total/NA	Solid	8021B	18657
LCS 880-18657/1-A	Lab Control Sample	Total/NA	Solid	8021B	18657
LCSD 880-18657/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	18657
890-1910-A-10-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	18657
890-1910-A-10-E MS	Matrix Spike	Total/NA	Solid	8021B	18657

Analysis Batch: 19024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Total/NA	Solid	Total BTEX	
880-10926-2	SW 5	Total/NA	Solid	Total BTEX	
880-10926-3	SW 8	Total/NA	Solid	Total BTEX	
880-10926-4	SW 10	Total/NA	Solid	Total BTEX	
880-10926-5	SW 11	Total/NA	Solid	Total BTEX	
880-10926-6	SW 12	Total/NA	Solid	Total BTEX	
880-10926-7	SW 17	Total/NA	Solid	Total BTEX	
880-10926-8	SW 19	Total/NA	Solid	Total BTEX	
880-10926-9	SW 43	Total/NA	Solid	Total BTEX	
880-10926-10	SW 45	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

GC Semi VOA

Prep Batch: 18594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Total/NA	Solid	8015NM Prep	
880-10926-2	SW 5	Total/NA	Solid	8015NM Prep	
880-10926-3	SW 8	Total/NA	Solid	8015NM Prep	
880-10926-4	SW 10	Total/NA	Solid	8015NM Prep	
880-10926-5	SW 11	Total/NA	Solid	8015NM Prep	
880-10926-6	SW 12	Total/NA	Solid	8015NM Prep	
MB 880-18594/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18594/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18594/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10912-A-21-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-10912-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 18603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-7	SW 17	Total/NA	Solid	8015NM Prep	
880-10926-8	SW 19	Total/NA	Solid	8015NM Prep	
880-10926-9	SW 43	Total/NA	Solid	8015NM Prep	
880-10926-10	SW 45	Total/NA	Solid	8015NM Prep	
MB 880-18603/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-18603/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-18603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-10926-7 MS	SW 17	Total/NA	Solid	8015NM Prep	
880-10926-7 MSD	SW 17	Total/NA	Solid	8015NM Prep	

Analysis Batch: 18620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Total/NA	Solid	8015B NM	18594
880-10926-2	SW 5	Total/NA	Solid	8015B NM	18594
880-10926-3	SW 8	Total/NA	Solid	8015B NM	18594
880-10926-4	SW 10	Total/NA	Solid	8015B NM	18594
880-10926-5	SW 11	Total/NA	Solid	8015B NM	18594
880-10926-6	SW 12	Total/NA	Solid	8015B NM	18594
MB 880-18594/1-A	Method Blank	Total/NA	Solid	8015B NM	18594
LCS 880-18594/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18594
LCSD 880-18594/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18594
880-10912-A-21-C MS	Matrix Spike	Total/NA	Solid	8015B NM	18594
880-10912-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	18594

Analysis Batch: 18649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-7	SW 17	Total/NA	Solid	8015B NM	18603
880-10926-8	SW 19	Total/NA	Solid	8015B NM	18603
880-10926-9	SW 43	Total/NA	Solid	8015B NM	18603
880-10926-10	SW 45	Total/NA	Solid	8015B NM	18603
MB 880-18603/1-A	Method Blank	Total/NA	Solid	8015B NM	18603
LCS 880-18603/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	18603
LCSD 880-18603/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	18603
880-10926-7 MS	SW 17	Total/NA	Solid	8015B NM	18603
880-10926-7 MSD	SW 17	Total/NA	Solid	8015B NM	18603

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

GC Semi VOA

Analysis Batch: 19008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Total/NA	Solid	8015 NM	
880-10926-2	SW 5	Total/NA	Solid	8015 NM	
880-10926-3	SW 8	Total/NA	Solid	8015 NM	
880-10926-4	SW 10	Total/NA	Solid	8015 NM	
880-10926-5	SW 11	Total/NA	Solid	8015 NM	
880-10926-6	SW 12	Total/NA	Solid	8015 NM	
880-10926-7	SW 17	Total/NA	Solid	8015 NM	
880-10926-8	SW 19	Total/NA	Solid	8015 NM	
880-10926-9	SW 43	Total/NA	Solid	8015 NM	
880-10926-10	SW 45	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 18571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Soluble	Solid	DI Leach	
880-10926-2	SW 5	Soluble	Solid	DI Leach	
880-10926-3	SW 8	Soluble	Solid	DI Leach	
MB 880-18571/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18571/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18571/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-10920-A-8-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-10920-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 18572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-4	SW 10	Soluble	Solid	DI Leach	
880-10926-5	SW 11	Soluble	Solid	DI Leach	
880-10926-6	SW 12	Soluble	Solid	DI Leach	
880-10926-7	SW 17	Soluble	Solid	DI Leach	
880-10926-8	SW 19	Soluble	Solid	DI Leach	
880-10926-9	SW 43	Soluble	Solid	DI Leach	
880-10926-10	SW 45	Soluble	Solid	DI Leach	
MB 880-18572/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-18572/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-18572/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-10893-A-11-D MS	Matrix Spike	Soluble	Solid	DI Leach	
880-10893-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 18733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-4	SW 10	Soluble	Solid	300.0	18572
880-10926-5	SW 11	Soluble	Solid	300.0	18572
880-10926-6	SW 12	Soluble	Solid	300.0	18572
880-10926-7	SW 17	Soluble	Solid	300.0	18572
880-10926-8	SW 19	Soluble	Solid	300.0	18572
880-10926-9	SW 43	Soluble	Solid	300.0	18572
880-10926-10	SW 45	Soluble	Solid	300.0	18572
MB 880-18572/1-A	Method Blank	Soluble	Solid	300.0	18572
LCS 880-18572/2-A	Lab Control Sample	Soluble	Solid	300.0	18572
LCSD 880-18572/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18572

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

HPLC/IC (Continued)

Analysis Batch: 18733 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10893-A-11-D MS	Matrix Spike	Soluble	Solid	300.0	18572
880-10893-A-11-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18572

Analysis Batch: 18734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-10926-1	SW 6	Soluble	Solid	300.0	18571
880-10926-2	SW 5	Soluble	Solid	300.0	18571
880-10926-3	SW 8	Soluble	Solid	300.0	18571
MB 880-18571/1-A	Method Blank	Soluble	Solid	300.0	18571
LCS 880-18571/2-A	Lab Control Sample	Soluble	Solid	300.0	18571
LCSD 880-18571/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	18571
880-10920-A-8-B MS	Matrix Spike	Soluble	Solid	300.0	18571
880-10920-A-8-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	18571

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 6

Date Collected: 02/01/22 09:25
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 13:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	18594	02/04/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18620	02/05/22 23:54	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	18571	02/04/22 16:00	CH	XEN MID
Soluble	Analysis	300.0		1			18734	02/11/22 23:46	CH	XEN MID

Client Sample ID: SW 5

Date Collected: 02/01/22 10:05
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 14:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	18594	02/04/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18620	02/06/22 00:15	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	18571	02/04/22 16:00	CH	XEN MID
Soluble	Analysis	300.0		1			18734	02/11/22 23:55	CH	XEN MID

Client Sample ID: SW 8

Date Collected: 02/01/22 12:15
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 14:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	18594	02/04/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18620	02/06/22 00:36	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	18571	02/04/22 16:00	CH	XEN MID
Soluble	Analysis	300.0		1			18734	02/12/22 00:05	CH	XEN MID

Client Sample ID: SW 10

Date Collected: 02/01/22 10:45
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 14:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 10

Date Collected: 02/01/22 10:45
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	18594	02/04/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18620	02/06/22 00:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	18572	02/04/22 12:49	CH	XEN MID
Soluble	Analysis	300.0		1			18733	02/09/22 23:50	CH	XEN MID

Client Sample ID: SW 11

Date Collected: 02/02/22 09:00
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 15:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	18594	02/04/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18620	02/06/22 01:17	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	18572	02/04/22 12:49	CH	XEN MID
Soluble	Analysis	300.0		1			18733	02/09/22 23:55	CH	XEN MID

Client Sample ID: SW 12

Date Collected: 02/01/22 14:15
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 15:34	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	18594	02/04/22 13:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18620	02/06/22 01:37	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	18572	02/04/22 12:49	CH	XEN MID
Soluble	Analysis	300.0		1			18733	02/09/22 23:59	CH	XEN MID

Client Sample ID: SW 17

Date Collected: 02/02/22 12:30
Date Received: 02/04/22 10:15

Lab Sample ID: 880-10926-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 17:24	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	18603	02/04/22 16:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18649	02/07/22 00:16	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Client Sample ID: SW 17

Lab Sample ID: 880-10926-7

Date Collected: 02/02/22 12:30
Matrix: Solid
Date Received: 02/04/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	18572	02/04/22 12:49	CH	XEN MID
Soluble	Analysis	300.0		1			18733	02/10/22 00:04	CH	XEN MID

Client Sample ID: SW 19

Lab Sample ID: 880-10926-8

Date Collected: 02/02/22 11:45
Matrix: Solid
Date Received: 02/04/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 17:44	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	18603	02/04/22 16:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18649	02/07/22 01:15	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	18572	02/04/22 12:49	CH	XEN MID
Soluble	Analysis	300.0		1			18733	02/10/22 00:09	CH	XEN MID

Client Sample ID: SW 43

Lab Sample ID: 880-10926-9

Date Collected: 02/01/22 13:20
Matrix: Solid
Date Received: 02/04/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 18:04	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	18603	02/04/22 16:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18649	02/07/22 01:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	18572	02/04/22 12:49	CH	XEN MID
Soluble	Analysis	300.0		1			18733	02/10/22 00:14	CH	XEN MID

Client Sample ID: SW 45

Lab Sample ID: 880-10926-10

Date Collected: 02/01/22 12:00
Matrix: Solid
Date Received: 02/04/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	18657	02/07/22 08:15	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	18659	02/07/22 18:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19024	02/10/22 10:09	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			19008	02/10/22 09:32	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	18603	02/04/22 16:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			18649	02/07/22 01:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	18572	02/04/22 12:49	CH	XEN MID
Soluble	Analysis	300.0		1			18733	02/10/22 00:19	CH	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc. Job ID: 880-10926-1
Project/Site: Mack PW SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-10926-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-10926-1	SW 6	Solid	02/01/22 09:25	02/04/22 10:15
880-10926-2	SW 5	Solid	02/01/22 10:05	02/04/22 10:15
880-10926-3	SW 8	Solid	02/01/22 12:15	02/04/22 10:15
880-10926-4	SW 10	Solid	02/01/22 10:45	02/04/22 10:15
880-10926-5	SW 11	Solid	02/02/22 09:00	02/04/22 10:15
880-10926-6	SW 12	Solid	02/01/22 14:15	02/04/22 10:15
880-10926-7	SW 17	Solid	02/02/22 12:30	02/04/22 10:15
880-10926-8	SW 19	Solid	02/02/22 11:45	02/04/22 10:15
880-10926-9	SW 43	Solid	02/01/22 13:20	02/04/22 10:15
880-10926-10	SW 45	Solid	02/01/22 12:00	02/04/22 10:15

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No. 2395

CHAIN-OF-CUSTODY

109276

Larson & Associates, Inc.
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Midland, TX 79701
432-687-0901

DATE: 2/4/22 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR:

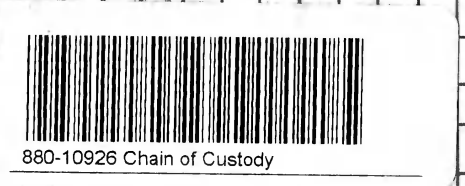
Data Reported to:

TRRP report? ☐ Yes ☐ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State:

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH	ICE	UNPRESSERVED	ANALYSES: BTEX ☐ MTBE ☐ By 8021B	TRPH 418.1 ☐ TPH 1005 ☐ TPH 100S ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE & ANIONS ☐ ALKALINITY ☐	FIELD NOTES
SW 6		2/1	9:25	S	1				X		X		X	X	X													X		
SW 5		2/1	10:05	S	1				X		X		X	X	X													X		
SW 8		2/1	1215	S	1				X		X		X	X	X													X		
SW 10		2/1	10:45	S	1				X		X		X	X	X													X		
SW 11		2/2	9:00	S	1				X		X		X	X	X													X		
SW 12		2/1	14:15	S	1				X		X		X	X	X													X		
SW 17		2/2	12:30	S	1				X		X		X	X	X													X		
SW 19		2/2	11:45	S	1				X		X		X	X	X													X		
SW 43		2/1	13:20	S	1				X		X		X	X	X													X		
SW 45		2/1	12:00	S	1				✓		X		X	X	X													X		
TOTAL																														



RELINQUISHED BY:(Signature) DATE/TIME 2/4 ~~15~~ 15 RECEIVED BY: (Signature) 2/4

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature) 1015

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: Xenco (Midland)

TURN AROUND TIME
NORMAL X
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 3.1/3.7 THERM#: IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Page 32 of 33

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

2/14/2022

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-10926-1
SDG Number: 21-0105-04

Login Number: 10926
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-11202-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
2/22/2022 12:32:53 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Laboratory Job ID: 880-11202-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Job ID: 880-11202-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-11202-1

Receipt
The samples were received on 2/11/2022 2:47 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -10.1°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19234 and analytical batch 880-19027 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.

Method 8021B: Surrogate recovery for the following sample was outside control limits: BH-98 (880-11202-27). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-19130 and analytical batch 880-19117 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015MOD_NM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 880-19197 and analytical batch 880-19282 recovered outside control limits for the following analytes: Diesel Range Organics (Over C10-C28)

Method 8015MOD_NM: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 880-19197 and analytical batch 880-19282 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (MB 880-19197/1-A). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: BH-92 (880-11202-21), BH-93 (880-11202-22), BH-94 (880-11202-23), BH-95 (880-11202-24) and BH-96 (880-11202-25). Percent recoveries are based on the amount spiked.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SP-1 (880-11202-1), SP-2 (880-11202-2), SP-3 (880-11202-3), SP-4 (880-11202-4), SP-5 (880-11202-5), SP-6 (880-11202-6), SP-7 (880-11202-7), BH-79 (880-11202-8), BH-80 (880-11202-9), BH-81 (880-11202-10), BH-82 (880-11202-11), BH-83 (880-11202-12), BH-84 (880-11202-13), BH-85 (880-11202-14), BH-86 (880-11202-15), BH-87 (880-11202-16), BH-88 (880-11202-17), BH-89 (880-11202-18), BH-90 (880-11202-19), BH-91 (880-11202-20), (880-11202-A-1-B MS) and (880-11202-A-1-C MSD). Evidence of matrix interferences is not obvious.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: BH-98 (880-11202-27), BH-99 (880-11202-28), SW-13 (880-11202-29), SW-14 (880-11202-30), SW-20 (880-11202-31), SW-22 (880-11202-32), SW-23 (880-11202-33), SW-24 (880-11202-34), SW-34 (880-11202-35), SW-38 (880-11202-36), (MB 880-19289/1-A), (880-11202-A-27-E MS) and (880-11202-A-27-F MSD). Evidence of matrix interferences is not obvious.

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

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

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Job ID: 880-11202-1 (Continued)

Laboratory: Eurofins Midland (Continued)

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SP-1 Lab Sample ID: 880-11202-1

Date Collected: 02/09/22 12:00 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:20	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:20	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:20	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		02/12/22 09:52	02/13/22 01:20	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:20	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/12/22 09:52	02/13/22 01:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*02/12/22 09:52*	*02/13/22 01:20*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*02/12/22 09:52*	*02/13/22 01:20*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 21:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 21:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*66*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 21:05*	*1*
o-Terphenyl (Surr)	*73*		*70 - 130*	*02/11/22 15:33*	*02/13/22 21:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**427**		4.98		mg/Kg			02/20/22 14:04	1

Client Sample ID: SP-2 Lab Sample ID: 880-11202-2

Date Collected: 02/09/22 12:02 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:46	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:46	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:46	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		02/12/22 09:52	02/13/22 01:46	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 01:46	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/12/22 09:52	02/13/22 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*02/12/22 09:52*	*02/13/22 01:46*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*02/12/22 09:52*	*02/13/22 01:46*	*1*

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SP-2

Date Collected: 02/09/22 12:02
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-2
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 22:05	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 22:05	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*60*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 22:05*	*1*
o-Terphenyl (Surr)	*64*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 22:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7890**		49.9		mg/Kg			02/20/22 14:24	10

Client Sample ID: SP-3

Date Collected: 02/09/22 12:04
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 02:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 02:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 02:13	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 02:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 02:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*02/12/22 09:52*	*02/13/22 02:13*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*02/12/22 09:52*	*02/13/22 02:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 22:26	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 22:26	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SP-3 Lab Sample ID: 880-11202-3

Date Collected: 02/09/22 12:04 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 22:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 22:26*	*1*
o-Terphenyl (Surr)	*69*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 22:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1090**		24.9		mg/Kg			02/20/22 14:30	5

Client Sample ID: SP-4 Lab Sample ID: 880-11202-4

Date Collected: 02/09/22 12:06 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 02:39	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 02:39	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 02:39	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/12/22 09:52	02/13/22 02:39	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 02:39	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/12/22 09:52	02/13/22 02:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/12/22 09:52*	*02/13/22 02:39*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*02/12/22 09:52*	*02/13/22 02:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 22:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 22:47	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 22:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*62*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 22:47*	*1*
o-Terphenyl (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 22:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**425**		4.97		mg/Kg			02/20/22 14:36	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SP-5

Date Collected: 02/09/22 12:08
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:06	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		02/12/22 09:52	02/13/22 03:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:06	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/12/22 09:52	02/13/22 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/12/22 09:52*	*02/13/22 03:06*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/12/22 09:52*	*02/13/22 03:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 23:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 23:08	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/13/22 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*58*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 23:08*	*1*
o-Terphenyl (Surr)	*59*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 23:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**209**		5.05		mg/Kg			02/20/22 14:43	1

Client Sample ID: SP-6

Date Collected: 02/09/22 12:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 03:33	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 03:33	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 03:33	1
m,p-Xylenes	<0.00403	U	0.00403		mg/Kg		02/12/22 09:52	02/13/22 03:33	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 03:33	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/12/22 09:52	02/13/22 03:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*02/12/22 09:52*	*02/13/22 03:33*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*02/12/22 09:52*	*02/13/22 03:33*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SP-6

Date Collected: 02/09/22 12:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-6
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 23:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 23:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*60*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 23:28*	*1*
o-Terphenyl (Surr)	*62*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 23:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**543**		5.04		mg/Kg			02/20/22 15:02	1

Client Sample ID: SP-7

Date Collected: 02/09/22 12:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-7
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:59	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 03:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 03:59	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 03:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*02/12/22 09:52*	*02/13/22 03:59*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*02/12/22 09:52*	*02/13/22 03:59*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 23:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 23:47	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SP-7 Lab Sample ID: 880-11202-7

Date Collected: 02/09/22 12:12 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*61*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 23:47*	*1*
o-Terphenyl (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 23:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**575**		4.98		mg/Kg			02/20/22 15:08	1

Client Sample ID: BH-79 Lab Sample ID: 880-11202-8

Date Collected: 02/08/22 08:00 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 04:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 04:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 04:26	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/12/22 09:52	02/13/22 04:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 04:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/12/22 09:52	02/13/22 04:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/12/22 09:52*	*02/13/22 04:26*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*02/12/22 09:52*	*02/13/22 04:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 00:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 00:08	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 00:08*	*1*
o-Terphenyl (Surr)	*70*		*70 - 130*	*02/11/22 15:33*	*02/14/22 00:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2510**		24.8		mg/Kg			02/20/22 15:15	5

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-80

Date Collected: 02/08/22 08:02
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-9
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 04:52	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 04:52	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 04:52	1
m,p-Xylenes	<0.00403	U	0.00403		mg/Kg		02/12/22 09:52	02/13/22 04:52	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 04:52	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/12/22 09:52	02/13/22 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/12/22 09:52*	*02/13/22 04:52*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*02/12/22 09:52*	*02/13/22 04:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 00:29	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 00:29	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*60*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 00:29*	*1*
o-Terphenyl (Surr)	*64*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 00:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**411**		4.95		mg/Kg			02/20/22 15:21	1

Client Sample ID: BH-81

Date Collected: 02/08/22 08:04
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-10
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 05:19	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 05:19	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 05:19	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 05:19	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 05:19	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 05:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*	*02/12/22 09:52*	*02/13/22 05:19*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*02/12/22 09:52*	*02/13/22 05:19*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-81

Date Collected: 02/08/22 08:04
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-10
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 00:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 00:49	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*57*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 00:49*	*1*
o-Terphenyl (Surr)	*61*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 00:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**659**		4.99		mg/Kg			02/20/22 15:27	1

Client Sample ID: BH-82

Date Collected: 02/08/22 08:06
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-11
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 07:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 07:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 07:08	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		02/12/22 09:52	02/13/22 07:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 07:08	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/12/22 09:52	02/13/22 07:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/12/22 09:52*	*02/13/22 07:08*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*02/12/22 09:52*	*02/13/22 07:08*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 01:30	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 01:30	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: BH-82 Lab Sample ID: 880-11202-11

Date Collected: 02/08/22 08:06 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 01:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*60*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 01:30*	*1*
o-Terphenyl (Surr)	*64*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 01:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**321**		5.00		mg/Kg			02/21/22 12:56	1

Client Sample ID: BH-83 Lab Sample ID: 880-11202-12

Date Collected: 02/08/22 08:08 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 07:36	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 07:36	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 07:36	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		02/12/22 09:52	02/13/22 07:36	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/12/22 09:52	02/13/22 07:36	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/12/22 09:52	02/13/22 07:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/12/22 09:52*	*02/13/22 07:36*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/12/22 09:52*	*02/13/22 07:36*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 01:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 01:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 01:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*59*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 01:50*	*1*
o-Terphenyl (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 01:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**333**		4.99		mg/Kg			02/20/22 12:49	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-84

Date Collected: 02/08/22 08:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-13
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 08:04	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 08:04	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 08:04	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		02/12/22 09:52	02/13/22 08:04	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/12/22 09:52	02/13/22 08:04	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/12/22 09:52	02/13/22 08:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/12/22 09:52*	*02/13/22 08:04*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*02/12/22 09:52*	*02/13/22 08:04*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 02:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 02:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 02:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*60*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 02:10*	*1*
o-Terphenyl (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 02:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**192**		5.01		mg/Kg			02/20/22 13:15	1

Client Sample ID: BH-85

Date Collected: 02/08/22 08:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-14
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 08:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 08:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 08:32	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		02/12/22 09:52	02/13/22 08:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 08:32	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/12/22 09:52	02/13/22 08:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/12/22 09:52*	*02/13/22 08:32*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/12/22 09:52*	*02/13/22 08:32*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-85

Date Collected: 02/08/22 08:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-14
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 02:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 02:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 02:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*59*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 02:29*	*1*
o-Terphenyl (Surr)	*62*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 02:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2470**		24.9		mg/Kg			02/20/22 13:24	5

Client Sample ID: BH-86

Date Collected: 02/08/22 08:14
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-15
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 09:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 09:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 09:00	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 09:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 09:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 09:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/12/22 09:52*	*02/13/22 09:00*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/12/22 09:52*	*02/13/22 09:00*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 02:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 02:49	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: BH-86 Lab Sample ID: 880-11202-15

Date Collected: 02/08/22 08:14 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 02:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*67*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 02:49*	*1*
o-Terphenyl (Surr)	*72*		*70 - 130*	*02/11/22 15:33*	*02/14/22 02:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**770**		24.8		mg/Kg			02/20/22 13:33	5

Client Sample ID: BH-87 Lab Sample ID: 880-11202-16

Date Collected: 02/08/22 08:16 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:28	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 09:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:28	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 09:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/12/22 09:52*	*02/13/22 09:28*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/12/22 09:52*	*02/13/22 09:28*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 03:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 03:10	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 03:10*	*1*
o-Terphenyl (Surr)	*69*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 03:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**957**		25.0		mg/Kg			02/20/22 13:42	5

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-88

Date Collected: 02/08/22 08:18
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-17
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:56	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 09:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 09:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 09:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*	*02/12/22 09:52*	*02/13/22 09:56*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*02/12/22 09:52*	*02/13/22 09:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 03:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 03:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 03:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*59*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 03:31*	*1*
o-Terphenyl (Surr)	*65*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 03:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**30.5**		4.96		mg/Kg			02/20/22 14:09	1

Client Sample ID: BH-89

Date Collected: 02/08/22 08:20
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-18
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 10:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 10:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 10:24	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 10:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 10:24	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/12/22 09:52	02/13/22 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/12/22 09:52*	*02/13/22 10:24*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*02/12/22 09:52*	*02/13/22 10:24*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-89

Date Collected: 02/08/22 08:20
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-18
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 03:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 03:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 03:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 03:51*	*1*
o-Terphenyl (Surr)	*69*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 03:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**65.4**		5.04		mg/Kg			02/20/22 14:17	1

Client Sample ID: BH-90

Date Collected: 02/08/22 08:22
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-19
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 10:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 10:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 10:51	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 10:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 09:52	02/13/22 10:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 09:52	02/13/22 10:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/12/22 09:52*	*02/13/22 10:51*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*02/12/22 09:52*	*02/13/22 10:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 04:12	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 04:12	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: BH-90 Lab Sample ID: 880-11202-19

Date Collected: 02/08/22 08:22 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:33	02/14/22 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*64*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 04:12*	*1*
o-Terphenyl (Surr)	*69*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 04:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1360**		24.9		mg/Kg			02/20/22 14:26	5

Client Sample ID: BH-91 Lab Sample ID: 880-11202-20

Date Collected: 02/08/22 08:24 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/12/22 09:52	02/13/22 11:18	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/12/22 09:52	02/13/22 11:18	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/12/22 09:52	02/13/22 11:18	1
m,p-Xylenes	<0.00396	U	0.00396		mg/Kg		02/12/22 09:52	02/13/22 11:18	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/12/22 09:52	02/13/22 11:18	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		02/12/22 09:52	02/13/22 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*02/12/22 09:52*	*02/13/22 11:18*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*02/12/22 09:52*	*02/13/22 11:18*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 04:32	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 04:32	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/14/22 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*61*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 04:32*	*1*
o-Terphenyl (Surr)	*67*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/14/22 04:32*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4210**		50.0		mg/Kg			02/20/22 14:35	10

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-92

Date Collected: 02/08/22 08:26
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-21
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		02/12/22 07:30	02/13/22 07:11	1
Toluene	<0.00198	U	0.00198		mg/Kg		02/12/22 07:30	02/13/22 07:11	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		02/12/22 07:30	02/13/22 07:11	1
m,p-Xylenes	<0.00397	U	0.00397		mg/Kg		02/12/22 07:30	02/13/22 07:11	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		02/12/22 07:30	02/13/22 07:11	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		02/12/22 07:30	02/13/22 07:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*02/12/22 07:30*	*02/13/22 07:11*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*02/12/22 07:30*	*02/13/22 07:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			02/14/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 18:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 18:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 18:04*	*1*
o-Terphenyl (Surr)	*67*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 18:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4950**		49.9		mg/Kg			02/20/22 14:44	10

Client Sample ID: BH-93

Date Collected: 02/08/22 08:28
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-22
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:31	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:31	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:31	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 07:30	02/13/22 07:31	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:31	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 07:30	02/13/22 07:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/12/22 07:30*	*02/13/22 07:31*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*02/12/22 07:30*	*02/13/22 07:31*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-93

Date Collected: 02/08/22 08:28
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-22
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 18:24	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 18:24	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*62*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 18:24*	*1*
o-Terphenyl (Surr)	*65*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 18:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4470**		49.8		mg/Kg			02/20/22 14:53	10

Client Sample ID: BH-94

Date Collected: 02/08/22 08:30
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-23
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:51	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:51	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:51	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 07:30	02/13/22 07:51	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 07:51	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 07:30	02/13/22 07:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*02/12/22 07:30*	*02/13/22 07:51*	*1*
1,4-Difluorobenzene (Surr)	*72*		*70 - 130*	*02/12/22 07:30*	*02/13/22 07:51*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:10	02/13/22 18:45	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:10	02/13/22 18:45	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: BH-94 Lab Sample ID: 880-11202-23

Date Collected: 02/08/22 08:30 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:10	02/13/22 18:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*62*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 18:45*	*1*
o-Terphenyl (Surr)	*69*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 18:45*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1480**		25.1		mg/Kg			02/20/22 15:19	5

Client Sample ID: BH-95 Lab Sample ID: 880-11202-24

Date Collected: 02/08/22 08:32 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 08:12	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 08:12	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 08:12	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		02/12/22 07:30	02/13/22 08:12	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 08:12	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/12/22 07:30	02/13/22 08:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*02/12/22 07:30*	*02/13/22 08:12*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*02/12/22 07:30*	*02/13/22 08:12*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/14/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 19:04	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 19:04	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/11/22 15:10	02/13/22 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*61*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 19:04*	*1*
o-Terphenyl (Surr)	*66*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 19:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2250**		24.9		mg/Kg			02/20/22 15:28	5

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-96

Date Collected: 02/08/22 08:34
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-25
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/12/22 07:30	02/13/22 08:32	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/12/22 07:30	02/13/22 08:32	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/12/22 07:30	02/13/22 08:32	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		02/12/22 07:30	02/13/22 08:32	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/12/22 07:30	02/13/22 08:32	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/12/22 07:30	02/13/22 08:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/12/22 07:30*	*02/13/22 08:32*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*02/12/22 07:30*	*02/13/22 08:32*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/14/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:10	02/13/22 19:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:10	02/13/22 19:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:10	02/13/22 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*60*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 19:24*	*1*
o-Terphenyl (Surr)	*64*	*S1-*	*70 - 130*	*02/11/22 15:10*	*02/13/22 19:24*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**51.2**		4.98		mg/Kg			02/20/22 15:55	1

Client Sample ID: BH-97

Date Collected: 02/08/22 08:36
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-26
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 08:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 08:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 08:53	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 07:30	02/13/22 08:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 07:30	02/13/22 08:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 07:30	02/13/22 08:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*02/12/22 07:30*	*02/13/22 08:53*	*1*
1,4-Difluorobenzene (Surr)	*73*		*70 - 130*	*02/12/22 07:30*	*02/13/22 08:53*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-97

Date Collected: 02/08/22 08:36
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-26
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:32	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/17/22 16:12	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 16:01	02/13/22 05:57	1
Diesel Range Organics (Over C10-C28)	<50.0	U *1	50.0		mg/Kg		02/11/22 16:01	02/13/22 05:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 16:01	02/13/22 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*77*		*70 - 130*	*02/11/22 16:01*	*02/13/22 05:57*	*1*
o-Terphenyl (Surr)	*70*		*70 - 130*	*02/11/22 16:01*	*02/13/22 05:57*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**192**		4.95		mg/Kg			02/20/22 16:04	1

Client Sample ID: BH-98

Date Collected: 02/09/22 12:14
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-27
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 15:14	1
Toluene	<0.00199	U F1	0.00199		mg/Kg		02/12/22 10:14	02/13/22 15:14	1
Ethylbenzene	<0.00199	U F1	0.00199		mg/Kg		02/12/22 10:14	02/13/22 15:14	1
m,p-Xylenes	<0.00398	U F1	0.00398		mg/Kg		02/12/22 10:14	02/13/22 15:14	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 15:14	1
Xylenes, Total	<0.00398	U F1	0.00398		mg/Kg		02/12/22 10:14	02/13/22 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*142*	*S1+*	*70 - 130*	*02/12/22 10:14*	*02/13/22 15:14*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*02/12/22 10:14*	*02/13/22 15:14*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 12:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 12:22	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: BH-98 Lab Sample ID: 880-11202-27

Date Collected: 02/09/22 12:14 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 12:22*	*1*
o-Terphenyl (Surr)	*67*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 12:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**271**		5.04		mg/Kg			02/20/22 16:12	1

Client Sample ID: BH-99 Lab Sample ID: 880-11202-28

Date Collected: 02/09/22 12:16 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 15:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 15:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 15:40	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		02/12/22 10:14	02/13/22 15:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 15:40	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/12/22 10:14	02/13/22 15:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*02/12/22 10:14*	*02/13/22 15:40*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*02/12/22 10:14*	*02/13/22 15:40*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 13:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 13:28	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 13:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*66*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 13:28*	*1*
o-Terphenyl (Surr)	*66*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 13:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2710**		24.8		mg/Kg			02/20/22 16:21	5

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-13

Date Collected: 02/08/22 09:00
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-29
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		02/12/22 10:14	02/13/22 16:06	1
Toluene	<0.00201	U	0.00201		mg/Kg		02/12/22 10:14	02/13/22 16:06	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		02/12/22 10:14	02/13/22 16:06	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		02/12/22 10:14	02/13/22 16:06	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		02/12/22 10:14	02/13/22 16:06	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		02/12/22 10:14	02/13/22 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/12/22 10:14*	*02/13/22 16:06*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*02/12/22 10:14*	*02/13/22 16:06*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 13:49	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 13:49	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 13:49*	*1*
o-Terphenyl (Surr)	*64*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 13:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**695**		25.0		mg/Kg			02/20/22 15:53	5

Client Sample ID: SW-14

Date Collected: 02/08/22 09:15
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-30
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:32	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:32	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:32	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		02/12/22 10:14	02/13/22 16:32	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:32	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/12/22 10:14	02/13/22 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*02/12/22 10:14*	*02/13/22 16:32*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*02/12/22 10:14*	*02/13/22 16:32*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-14

Date Collected: 02/08/22 09:15
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-30
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 14:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 14:10	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*64*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 14:10*	*1*
o-Terphenyl (Surr)	*65*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 14:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42.0**		4.95		mg/Kg			02/20/22 15:59	1

Client Sample ID: SW-20

Date Collected: 02/08/22 09:45
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-31
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:58	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:58	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:58	1
m,p-Xylenes	<0.00404	U	0.00404		mg/Kg		02/12/22 10:14	02/13/22 16:58	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 16:58	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/12/22 10:14	02/13/22 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*02/12/22 10:14*	*02/13/22 16:58*	*1*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*02/12/22 10:14*	*02/13/22 16:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 14:31	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 14:31	1

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Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SW-20 Lab Sample ID: 880-11202-31

Date Collected: 02/08/22 09:45 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 14:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*64*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 14:31*	*1*
o-Terphenyl (Surr)	*65*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 14:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.7**		5.05		mg/Kg			02/20/22 16:18	1

Client Sample ID: SW-22 Lab Sample ID: 880-11202-32

Date Collected: 02/08/22 10:45 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:23	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		02/12/22 10:14	02/13/22 17:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:23	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		02/12/22 10:14	02/13/22 17:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*02/12/22 10:14*	*02/13/22 17:23*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*02/12/22 10:14*	*02/13/22 17:23*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 14:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 14:52	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*63*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 14:52*	*1*
o-Terphenyl (Surr)	*62*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 14:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**647**		5.01		mg/Kg			02/20/22 16:24	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-23

Date Collected: 02/08/22 10:50
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-33
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:50	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		02/12/22 10:14	02/13/22 17:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 17:50	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/12/22 10:14	02/13/22 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*02/12/22 10:14*	*02/13/22 17:50*	*1*
1,4-Difluorobenzene (Surr)	*80*		*70 - 130*	*02/12/22 10:14*	*02/13/22 17:50*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 15:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 15:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/14/22 08:44	02/14/22 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*60*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 15:14*	*1*
o-Terphenyl (Surr)	*60*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 15:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**460**		4.95		mg/Kg			02/20/22 16:31	1

Client Sample ID: SW-24

Date Collected: 02/08/22 10:55
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-34
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 18:16	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 18:16	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 18:16	1
m,p-Xylenes	<0.00403	U	0.00403		mg/Kg		02/12/22 10:14	02/13/22 18:16	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/12/22 10:14	02/13/22 18:16	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		02/12/22 10:14	02/13/22 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*02/12/22 10:14*	*02/13/22 18:16*	*1*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*02/12/22 10:14*	*02/13/22 18:16*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-24

Date Collected: 02/08/22 10:55
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-34
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 15:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 15:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*62*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 15:36*	*1*
o-Terphenyl (Surr)	*61*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 15:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1020**		4.97		mg/Kg			02/20/22 16:37	1

Client Sample ID: SW-34

Date Collected: 02/08/22 14:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-35
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 18:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 18:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 18:43	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/12/22 10:14	02/13/22 18:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 10:14	02/13/22 18:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/12/22 10:14	02/13/22 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*02/12/22 10:14*	*02/13/22 18:43*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*02/12/22 10:14*	*02/13/22 18:43*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 15:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 15:58	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Client Sample ID: SW-34 Lab Sample ID: 880-11202-35

Date Collected: 02/08/22 14:10 **Matrix: Solid**
Date Received: 02/11/22 14:47

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 15:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*61*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 15:58*	*1*
o-Terphenyl (Surr)	*61*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 15:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**649**		4.99		mg/Kg			02/20/22 16:43	1

Client Sample ID: SW-38 Lab Sample ID: 880-11202-36

Date Collected: 02/09/22 08:12 **Matrix: Solid**
Date Received: 02/11/22 14:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 19:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 19:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 19:09	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 10:14	02/13/22 19:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 19:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 10:14	02/13/22 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*02/12/22 10:14*	*02/13/22 19:09*	*1*
1,4-Difluorobenzene (Surr)	*78*		*70 - 130*	*02/12/22 10:14*	*02/13/22 19:09*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			02/15/22 12:34	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 16:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 16:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*66*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 16:19*	*1*
o-Terphenyl (Surr)	*65*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 16:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**650**		4.95		mg/Kg			02/20/22 16:50	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-39

Date Collected: 02/07/22 14:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-37

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 20:52	1
Toluene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 20:52	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 20:52	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		02/12/22 10:14	02/13/22 20:52	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		02/12/22 10:14	02/13/22 20:52	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		02/12/22 10:14	02/13/22 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*	*02/12/22 10:14*	*02/13/22 20:52*	*1*
1,4-Difluorobenzene (Surr)	*75*		*70 - 130*	*02/12/22 10:14*	*02/13/22 20:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			02/14/22 09:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:41	02/14/22 15:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:41	02/14/22 15:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:41	02/14/22 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*92*		*70 - 130*	*02/14/22 08:41*	*02/14/22 15:05*	*1*
o-Terphenyl (Surr)	*92*		*70 - 130*	*02/14/22 08:41*	*02/14/22 15:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**741**		5.00		mg/Kg			02/20/22 16:56	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-11191-A-1-H MS	Matrix Spike	148 S1+	112
880-11191-A-1-I MSD	Matrix Spike Duplicate	27 S1-	71
880-11202-1	SP-1	122	78
880-11202-1 MS	SP-1	106	102
880-11202-1 MSD	SP-1	108	96
880-11202-2	SP-2	115	84
880-11202-3	SP-3	120	91
880-11202-4	SP-4	110	98
880-11202-5	SP-5	112	90
880-11202-6	SP-6	107	92
880-11202-7	SP-7	122	102
880-11202-8	BH-79	109	99
880-11202-9	BH-80	113	88
880-11202-10	BH-81	122	99
880-11202-11	BH-82	110	87
880-11202-12	BH-83	112	93
880-11202-13	BH-84	109	88
880-11202-14	BH-85	119	93
880-11202-15	BH-86	110	90
880-11202-16	BH-87	110	90
880-11202-17	BH-88	112	90
880-11202-18	BH-89	113	94
880-11202-19	BH-90	118	93
880-11202-20	BH-91	109	95
880-11202-21	BH-92	121	98
880-11202-22	BH-93	100	92
880-11202-23	BH-94	100	72
880-11202-24	BH-95	118	89
880-11202-25	BH-96	110	103
880-11202-26	BH-97	97	73
880-11202-27	BH-98	142 S1+	94
880-11202-27 MS	BH-98	118	100
880-11202-27 MSD	BH-98	122	95
880-11202-28	BH-99	119	78
880-11202-29	SW-13	113	84
880-11202-30	SW-14	93	96
880-11202-31	SW-20	110	88
880-11202-32	SW-22	125	97
880-11202-33	SW-23	105	80
880-11202-34	SW-24	121	89
880-11202-35	SW-34	121	104
880-11202-36	SW-38	83	78
880-11202-37	SW-39	125	75
LCS 880-19130/1-A	Lab Control Sample	89	87
LCS 880-19232/1-A	Lab Control Sample	106	100
LCS 880-19234/1-A	Lab Control Sample	113	93
LCSD 880-19130/2-A	Lab Control Sample Dup	93	88
LCSD 880-19232/2-A	Lab Control Sample Dup	100	93
LCSD 880-19234/2-A	Lab Control Sample Dup	122	87

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

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

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) BFB1 (70-130)	DFBZ1 (70-130)
MB 880-19023/5-A	Method Blank	124	98
MB 880-19118/5-A	Method Blank	80	83
MB 880-19130/5-A	Method Blank	124	101
MB 880-19232/5-A	Method Blank	83	76
MB 880-19234/5-A	Method Blank	84	82

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) 1CO1 (70-130)	OTPH1 (70-130)
880-11202-1	SP-1	66 S1-	73
880-11202-1 MS	SP-1	61 S1-	55 S1-
880-11202-1 MSD	SP-1	61 S1-	55 S1-
880-11202-2	SP-2	60 S1-	64 S1-
880-11202-3	SP-3	63 S1-	69 S1-
880-11202-4	SP-4	62 S1-	63 S1-
880-11202-5	SP-5	58 S1-	59 S1-
880-11202-6	SP-6	60 S1-	62 S1-
880-11202-7	SP-7	61 S1-	63 S1-
880-11202-8	BH-79	63 S1-	70
880-11202-9	BH-80	60 S1-	64 S1-
880-11202-10	BH-81	57 S1-	61 S1-
880-11202-11	BH-82	60 S1-	64 S1-
880-11202-12	BH-83	59 S1-	63 S1-
880-11202-13	BH-84	60 S1-	63 S1-
880-11202-14	BH-85	59 S1-	62 S1-
880-11202-15	BH-86	67 S1-	72
880-11202-16	BH-87	63 S1-	69 S1-
880-11202-17	BH-88	59 S1-	65 S1-
880-11202-18	BH-89	63 S1-	69 S1-
880-11202-19	BH-90	64 S1-	69 S1-
880-11202-20	BH-91	61 S1-	67 S1-
880-11202-21	BH-92	63 S1-	67 S1-
880-11202-22	BH-93	62 S1-	65 S1-
880-11202-23	BH-94	62 S1-	69 S1-
880-11202-24	BH-95	61 S1-	66 S1-
880-11202-25	BH-96	60 S1-	64 S1-
880-11202-26	BH-97	77	70
880-11202-27	BH-98	63 S1-	67 S1-
880-11202-27 MS	BH-98	71	61 S1-
880-11202-27 MSD	BH-98	62 S1-	52 S1-
880-11202-28	BH-99	66 S1-	66 S1-
880-11202-29	SW-13	63 S1-	64 S1-
880-11202-30	SW-14	64 S1-	65 S1-
880-11202-31	SW-20	64 S1-	65 S1-

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-11202-32	SW-22	63 S1-	62 S1-
880-11202-33	SW-23	60 S1-	60 S1-
880-11202-34	SW-24	62 S1-	61 S1-
880-11202-35	SW-34	61 S1-	61 S1-
880-11202-36	SW-38	66 S1-	65 S1-
880-11202-37	SW-39	92	92
880-11203-A-1-B MS	Matrix Spike	58 S1-	53 S1-
880-11203-A-1-C MSD	Matrix Spike Duplicate	75	79
890-1933-A-1-G MS	Matrix Spike	76	74
890-1933-A-1-H MSD	Matrix Spike Duplicate	70	74
LCS 880-19181/2-A	Lab Control Sample	102	104
LCS 880-19289/2-A	Lab Control Sample	101	98
LCSD 880-19181/3-A	Lab Control Sample Dup	102	103
LCSD 880-19289/3-A	Lab Control Sample Dup	104	100
MB 880-19181/1-A	Method Blank	64 S1-	72
MB 880-19289/1-A	Method Blank	67 S1-	73

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-19197/2-A	Lab Control Sample	109	107
LCS 880-19288/2-A	Lab Control Sample	107	103
LCSD 880-19197/3-A	Lab Control Sample Dup	87	89
LCSD 880-19288/3-A	Lab Control Sample Dup	106	113
MB 880-19197/1-A	Method Blank	71	66 S1-
MB 880-19288/1-A	Method Blank	87	90

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-19023/5-A
Matrix: Solid
Analysis Batch: 19117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19023

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/22 09:59	02/12/22 12:51	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/22 09:59	02/12/22 12:51	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/22 09:59	02/12/22 12:51	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/11/22 09:59	02/12/22 12:51	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/22 09:59	02/12/22 12:51	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/11/22 09:59	02/12/22 12:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*02/11/22 09:59*	*02/12/22 12:51*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*02/11/22 09:59*	*02/12/22 12:51*	*1*

Lab Sample ID: MB 880-19118/5-A
Matrix: Solid
Analysis Batch: 19027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19118

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/11/22 10:00	02/12/22 10:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/11/22 10:00	02/12/22 10:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/11/22 10:00	02/12/22 10:55	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/11/22 10:00	02/12/22 10:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/11/22 10:00	02/12/22 10:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/11/22 10:00	02/12/22 10:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*02/11/22 10:00*	*02/12/22 10:55*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*02/11/22 10:00*	*02/12/22 10:55*	*1*

Lab Sample ID: MB 880-19130/5-A
Matrix: Solid
Analysis Batch: 19117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19130

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 00:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 00:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 00:27	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/12/22 07:30	02/13/22 00:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 07:30	02/13/22 00:27	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/12/22 07:30	02/13/22 00:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*02/12/22 07:30*	*02/13/22 00:27*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*02/12/22 07:30*	*02/13/22 00:27*	*1*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: LCS 880-19130/1-A
Matrix: Solid
Analysis Batch: 19117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19130

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08574		mg/Kg		86	70 - 130		
Toluene			0.100	0.08976		mg/Kg		90	70 - 130		
Ethylbenzene			0.100	0.09183		mg/Kg		92	70 - 130		
m,p-Xylenes			0.200	0.1765		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.08123		mg/Kg		81	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: LCSD 880-19130/2-A
Matrix: Solid
Analysis Batch: 19117

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19130

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08945		mg/Kg		89	70 - 130	4	35
Toluene			0.100	0.09597		mg/Kg		96	70 - 130	7	35
Ethylbenzene			0.100	0.1026		mg/Kg		103	70 - 130	11	35
m,p-Xylenes			0.200	0.1906		mg/Kg		95	70 - 130	8	35
o-Xylene			0.100	0.08767		mg/Kg		88	70 - 130	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*

Lab Sample ID: 880-11191-A-1-H MS
Matrix: Solid
Analysis Batch: 19117

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 19130

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U F1 F2	0.0998	0.006201	F1	mg/Kg		6	70 - 130		
Toluene	<0.00199	U F1 F2	0.0998	0.05483	F1	mg/Kg		55	70 - 130		
Ethylbenzene	<0.00199	U F1 F2	0.0998	0.1621	F1	mg/Kg		162	70 - 130		
m,p-Xylenes	<0.00398	U F1 F2	0.200	0.1516		mg/Kg		76	70 - 130		
o-Xylene	<0.00199	U F1 F2	0.0998	0.08447		mg/Kg		85	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*148*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-11191-A-1-I MSD
Matrix: Solid
Analysis Batch: 19117

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 19130

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1 F2	0.0996	0.06079	F1 F2	mg/Kg		61	70 - 130	163	35
Toluene	<0.00199	U F1 F2	0.0996	0.01657	F1 F2	mg/Kg		17	70 - 130	107	35
Ethylbenzene	<0.00199	U F1 F2	0.0996	0.01376	F1 F2	mg/Kg		14	70 - 130	169	35

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

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

Lab Sample ID: 880-11191-A-1-I MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19117 **Prep Batch: 19130**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m,p-Xylenes	<0.00398	U F1 F2	0.199	0.06518	F1 F2	mg/Kg		33	70 - 130	80	35
o-Xylene	<0.00199	U F1 F2	0.0996	0.04044	F1 F2	mg/Kg		41	70 - 130	71	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*27*	*S1-*	*70 - 130*
1,4-Difluorobenzene (Surr)	*71*		*70 - 130*

Lab Sample ID: MB 880-19232/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19027 **Prep Batch: 19232**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 00:53	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 00:53	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 00:53	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		02/12/22 09:52	02/13/22 00:53	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/12/22 09:52	02/13/22 00:53	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/12/22 09:52	02/13/22 00:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*	*02/12/22 09:52*	*02/13/22 00:53*	*1*
1,4-Difluorobenzene (Surr)	*76*		*70 - 130*	*02/12/22 09:52*	*02/13/22 00:53*	*1*

Lab Sample ID: LCS 880-19232/1-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19027 **Prep Batch: 19232**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08896		mg/Kg		89	70 - 130		
Toluene			0.100	0.08130		mg/Kg		81	70 - 130		
Ethylbenzene			0.100	0.07964		mg/Kg		80	70 - 130		
m,p-Xylenes			0.200	0.1614		mg/Kg		81	70 - 130		
o-Xylene			0.100	0.08585		mg/Kg		86	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-19232/2-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 19027 **Prep Batch: 19232**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.07710		mg/Kg		77	70 - 130	14	35
Toluene			0.100	0.07434		mg/Kg		74	70 - 130	9	35
Ethylbenzene			0.100	0.07306		mg/Kg		73	70 - 130	9	35
m,p-Xylenes			0.200	0.1483		mg/Kg		74	70 - 130	8	35
o-Xylene			0.100	0.08202		mg/Kg		82	70 - 130	5	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Lab Sample ID: 880-11202-1 MS — **Client Sample ID: SP-1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19027 — **Prep Batch: 19232**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00201	U	0.101	0.08058		mg/Kg		80	70 - 130
Toluene	<0.00201	U	0.101	0.07494		mg/Kg		74	70 - 130
Ethylbenzene	<0.00201	U	0.101	0.07156		mg/Kg		71	70 - 130
m,p-Xylenes	<0.00402	U	0.202	0.1455		mg/Kg		72	70 - 130
o-Xylene	<0.00201	U	0.101	0.07518		mg/Kg		74	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 880-11202-1 MSD — **Client Sample ID: SP-1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19027 — **Prep Batch: 19232**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.101	0.07211		mg/Kg		72	70 - 130	11	35
Toluene	<0.00201	U	0.101	0.07394		mg/Kg		73	70 - 130	1	35
Ethylbenzene	<0.00201	U	0.101	0.07021		mg/Kg		70	70 - 130	2	35
m,p-Xylenes	<0.00402	U	0.201	0.1414		mg/Kg		70	70 - 130	3	35
o-Xylene	<0.00201	U	0.101	0.07244		mg/Kg		72	70 - 130	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: MB 880-19234/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19027 — **Prep Batch: 19234**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		02/12/22 10:14	02/13/22 14:47	1
Toluene	<0.00200	U	0.00200	mg/Kg		02/12/22 10:14	02/13/22 14:47	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		02/12/22 10:14	02/13/22 14:47	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		02/12/22 10:14	02/13/22 14:47	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		02/12/22 10:14	02/13/22 14:47	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		02/12/22 10:14	02/13/22 14:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		70 - 130	02/12/22 10:14	02/13/22 14:47	1
1,4-Difluorobenzene (Surr)	82		70 - 130	02/12/22 10:14	02/13/22 14:47	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: LCS 880-19234/1-A
Matrix: Solid
Analysis Batch: 19027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19234

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.08715		mg/Kg		87	70 - 130		
Toluene			0.100	0.08882		mg/Kg		89	70 - 130		
Ethylbenzene			0.100	0.08743		mg/Kg		87	70 - 130		
m,p-Xylenes			0.200	0.1759		mg/Kg		88	70 - 130		
o-Xylene			0.100	0.09475		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-19234/2-A
Matrix: Solid
Analysis Batch: 19027

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19234

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.08324		mg/Kg		83	70 - 130	5	35
Toluene			0.100	0.08132		mg/Kg		81	70 - 130	9	35
Ethylbenzene			0.100	0.08642		mg/Kg		86	70 - 130	1	35
m,p-Xylenes			0.200	0.1722		mg/Kg		86	70 - 130	2	35
o-Xylene			0.100	0.09227		mg/Kg		92	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: 880-11202-27 MS
Matrix: Solid
Analysis Batch: 19027

Client Sample ID: BH-98
Prep Type: Total/NA
Prep Batch: 19234

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.100	0.06978		mg/Kg		70	70 - 130		
Toluene	<0.00199	U F1	0.100	0.06924	F1	mg/Kg		69	70 - 130		
Ethylbenzene	<0.00199	U F1	0.100	0.06719	F1	mg/Kg		67	70 - 130		
m,p-Xylenes	<0.00398	U F1	0.201	0.1348	F1	mg/Kg		67	70 - 130		
o-Xylene	<0.00199	U	0.100	0.07271		mg/Kg		72	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-11202-27 MSD
Matrix: Solid
Analysis Batch: 19027

Client Sample ID: BH-98
Prep Type: Total/NA
Prep Batch: 19234

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0990	0.07056		mg/Kg		71	70 - 130	1	35
Toluene	<0.00199	U F1	0.0990	0.07135		mg/Kg		72	70 - 130	3	35
Ethylbenzene	<0.00199	U F1	0.0990	0.07007		mg/Kg		71	70 - 130	4	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: 880-11202-27 MSD
Matrix: Solid
Analysis Batch: 19027

Client Sample ID: BH-98
Prep Type: Total/NA
Prep Batch: 19234

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m,p-Xylenes	<0.00398	U F1	0.198	0.1416		mg/Kg		71	70 - 130	5	35
o-Xylene	<0.00199	U	0.0990	0.07372		mg/Kg		74	70 - 130	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*70 - 130*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*

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

Lab Sample ID: MB 880-19181/1-A
Matrix: Solid
Analysis Batch: 19246

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19181

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 20:05	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 20:05	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 15:33	02/13/22 20:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*64*	*S1-*	*70 - 130*	*02/11/22 15:33*	*02/13/22 20:05*	*1*
o-Terphenyl (Surr)	*72*		*70 - 130*	*02/11/22 15:33*	*02/13/22 20:05*	*1*

Lab Sample ID: LCS 880-19181/2-A
Matrix: Solid
Analysis Batch: 19246

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19181

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	843.6		mg/Kg		84	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	949.4		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*102*		*70 - 130*
o-Terphenyl (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 880-19181/3-A
Matrix: Solid
Analysis Batch: 19246

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19181

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	868.1		mg/Kg		87	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	929.3		mg/Kg		93	70 - 130	2	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-19181/3-A
Matrix: Solid
Analysis Batch: 19246

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19181

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	102		70 - 130
o-Terphenyl (Surr)	103		70 - 130

Lab Sample ID: 880-11202-1 MS
Matrix: Solid
Analysis Batch: 19246

Client Sample ID: SP-1
Prep Type: Total/NA
Prep Batch: 19181

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	882.0		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	884.2		mg/Kg		87	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane (Surr)	61	S1-	70 - 130
o-Terphenyl (Surr)	55	S1-	70 - 130

Lab Sample ID: 880-11202-1 MSD
Matrix: Solid
Analysis Batch: 19246

Client Sample ID: SP-1
Prep Type: Total/NA
Prep Batch: 19181

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	959.0		mg/Kg		93	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	869.5		mg/Kg		85	70 - 130	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane (Surr)	61	S1-	70 - 130
o-Terphenyl (Surr)	55	S1-	70 - 130

Lab Sample ID: MB 880-19197/1-A
Matrix: Solid
Analysis Batch: 19282

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19197

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/11/22 16:01	02/12/22 20:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/11/22 16:01	02/12/22 20:40	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/11/22 16:01	02/12/22 20:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	71		70 - 130	02/11/22 16:01	02/12/22 20:40	1
o-Terphenyl (Surr)	66	S1-	70 - 130	02/11/22 16:01	02/12/22 20:40	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: LCS 880-19197/2-A
Matrix: Solid
Analysis Batch: 19282

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19197

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	922.1		mg/Kg		92	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1033		mg/Kg		103	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*109*		*70 - 130*
o-Terphenyl (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-19197/3-A
Matrix: Solid
Analysis Batch: 19282

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19197

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	950.5		mg/Kg		95	70 - 130	3	20
Diesel Range Organics (Over C10-C28)			1000	814.0	*1	mg/Kg		81	70 - 130	24	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*87*		*70 - 130*
o-Terphenyl (Surr)	*89*		*70 - 130*

Lab Sample ID: 880-11203-A-1-B MS
Matrix: Solid
Analysis Batch: 19282

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 19197

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	81.3	F1 F2	1000	836.2		mg/Kg		75	70 - 130		
Diesel Range Organics (Over C10-C28)	257	*1 F1 F2	1000	949.6	F1	mg/Kg		69	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*58*	*S1-*	*70 - 130*
o-Terphenyl (Surr)	*53*	*S1-*	*70 - 130*

Lab Sample ID: 880-11203-A-1-C MSD
Matrix: Solid
Analysis Batch: 19282

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 19197

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	81.3	F1 F2	998	1497	F1 F2	mg/Kg		142	70 - 130	57	20
Diesel Range Organics (Over C10-C28)	257	*1 F1 F2	998	1272	F2	mg/Kg		102	70 - 130	29	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*75*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: 880-11203-A-1-C MSD
Matrix: Solid
Analysis Batch: 19282

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 19197

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	79		70 - 130

Lab Sample ID: MB 880-19288/1-A
Matrix: Solid
Analysis Batch: 19305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 19288

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:41	02/14/22 10:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:41	02/14/22 10:54	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:41	02/14/22 10:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	87		70 - 130	02/14/22 08:41	02/14/22 10:54	1
o-Terphenyl (Surr)	90		70 - 130	02/14/22 08:41	02/14/22 10:54	1

Lab Sample ID: LCS 880-19288/2-A
Matrix: Solid
Analysis Batch: 19305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19288

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1011		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	968.8		mg/Kg		97	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	107		70 - 130
o-Terphenyl (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-19288/3-A
Matrix: Solid
Analysis Batch: 19305

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19288

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1004		mg/Kg		100	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	986.1		mg/Kg		99	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	106		70 - 130
o-Terphenyl (Surr)	113		70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: 890-1933-A-1-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19305 — **Prep Batch: 19288**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	866.3		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	954.7		mg/Kg		95	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*76*		*70 - 130*
o-Terphenyl (Surr)	*74*		*70 - 130*

Lab Sample ID: 890-1933-A-1-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19305 — **Prep Batch: 19288**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	833.1		mg/Kg		82	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	961.6		mg/Kg		96	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*70*		*70 - 130*
o-Terphenyl (Surr)	*74*		*70 - 130*

Lab Sample ID: MB 880-19289/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19306 — **Prep Batch: 19289**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 11:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 11:17	1
OIl Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/14/22 08:44	02/14/22 11:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*67*	*S1-*	*70 - 130*	*02/14/22 08:44*	*02/14/22 11:17*	*1*
o-Terphenyl (Surr)	*73*		*70 - 130*	*02/14/22 08:44*	*02/14/22 11:17*	*1*

Lab Sample ID: LCS 880-19289/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 19306 — **Prep Batch: 19289**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	854.2		mg/Kg		85	70 - 130
Diesel Range Organics (Over C10-C28)	1000	926.1		mg/Kg		93	70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

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

Lab Sample ID: LCS 880-19289/2-A
Matrix: Solid
Analysis Batch: 19306

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 19289

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	101		70 - 130
o-Terphenyl (Surr)	98		70 - 130

Lab Sample ID: LCSD 880-19289/3-A
Matrix: Solid
Analysis Batch: 19306

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 19289

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	859.1		mg/Kg		86	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	922.5		mg/Kg		92	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	104		70 - 130
o-Terphenyl (Surr)	100		70 - 130

Lab Sample ID: 880-11202-27 MS
Matrix: Solid
Analysis Batch: 19306

Client Sample ID: BH-98
Prep Type: Total/NA
Prep Batch: 19289

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1005		mg/Kg		98	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	948.0		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane (Surr)	71		70 - 130
o-Terphenyl (Surr)	61	S1-	70 - 130

Lab Sample ID: 880-11202-27 MSD
Matrix: Solid
Analysis Batch: 19306

Client Sample ID: BH-98
Prep Type: Total/NA
Prep Batch: 19289

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	899.0		mg/Kg		88	70 - 130	11	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	816.1		mg/Kg		80	70 - 130	15	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane (Surr)	62	S1-	70 - 130
o-Terphenyl (Surr)	52	S1-	70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-19432/1-A
Matrix: Solid
Analysis Batch: 19879

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/20/22 12:22	1

Lab Sample ID: LCS 880-19432/2-A
Matrix: Solid
Analysis Batch: 19879

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	250.7		mg/Kg		100	90 - 110		

Lab Sample ID: LCSD 880-19432/3-A
Matrix: Solid
Analysis Batch: 19879

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	249.8		mg/Kg		100	90 - 110	0	20

Lab Sample ID: 880-11202-12 MS
Matrix: Solid
Analysis Batch: 19879

Client Sample ID: BH-83
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	333		250	582.4		mg/Kg		100	90 - 110		

Lab Sample ID: 880-11202-12 MSD
Matrix: Solid
Analysis Batch: 19879

Client Sample ID: BH-83
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	333		250	567.2		mg/Kg		94	90 - 110	3	20

Lab Sample ID: 880-11202-22 MS
Matrix: Solid
Analysis Batch: 19879

Client Sample ID: BH-93
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	4470		2490	7147		mg/Kg		108	90 - 110		

Lab Sample ID: 880-11202-22 MSD
Matrix: Solid
Analysis Batch: 19879

Client Sample ID: BH-93
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4470		2490	7186		mg/Kg		109	90 - 110	1	20

Lab Sample ID: MB 880-19431/1-A
Matrix: Solid
Analysis Batch: 19881

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/20/22 13:45	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 880-19431/2-A
Matrix: Solid
Analysis Batch: 19881

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	259.6		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-19431/3-A
Matrix: Solid
Analysis Batch: 19881

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	261.6		mg/Kg		105	90 - 110	1	20

Lab Sample ID: 880-11202-1 MS
Matrix: Solid
Analysis Batch: 19881

Client Sample ID: SP-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	427		249	669.6		mg/Kg		97	90 - 110		

Lab Sample ID: 880-11202-1 MSD
Matrix: Solid
Analysis Batch: 19881

Client Sample ID: SP-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	427		249	680.1		mg/Kg		102	90 - 110	2	20

Lab Sample ID: 880-11202-11 MS
Matrix: Solid
Analysis Batch: 19881

Client Sample ID: BH-82
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	321		250	571.9		mg/Kg		101	90 - 110		

Lab Sample ID: 880-11202-11 MSD
Matrix: Solid
Analysis Batch: 19881

Client Sample ID: BH-82
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	321		250	571.4		mg/Kg		100	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

GC VOA

Prep Batch: 19023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19023/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 19027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Total/NA	Solid	8021B	19232
880-11202-2	SP-2	Total/NA	Solid	8021B	19232
880-11202-3	SP-3	Total/NA	Solid	8021B	19232
880-11202-4	SP-4	Total/NA	Solid	8021B	19232
880-11202-5	SP-5	Total/NA	Solid	8021B	19232
880-11202-6	SP-6	Total/NA	Solid	8021B	19232
880-11202-7	SP-7	Total/NA	Solid	8021B	19232
880-11202-8	BH-79	Total/NA	Solid	8021B	19232
880-11202-9	BH-80	Total/NA	Solid	8021B	19232
880-11202-10	BH-81	Total/NA	Solid	8021B	19232
880-11202-11	BH-82	Total/NA	Solid	8021B	19232
880-11202-12	BH-83	Total/NA	Solid	8021B	19232
880-11202-13	BH-84	Total/NA	Solid	8021B	19232
880-11202-14	BH-85	Total/NA	Solid	8021B	19232
880-11202-15	BH-86	Total/NA	Solid	8021B	19232
880-11202-16	BH-87	Total/NA	Solid	8021B	19232
880-11202-17	BH-88	Total/NA	Solid	8021B	19232
880-11202-18	BH-89	Total/NA	Solid	8021B	19232
880-11202-19	BH-90	Total/NA	Solid	8021B	19232
880-11202-20	BH-91	Total/NA	Solid	8021B	19232
880-11202-27	BH-98	Total/NA	Solid	8021B	19234
880-11202-28	BH-99	Total/NA	Solid	8021B	19234
880-11202-29	SW-13	Total/NA	Solid	8021B	19234
880-11202-30	SW-14	Total/NA	Solid	8021B	19234
880-11202-31	SW-20	Total/NA	Solid	8021B	19234
880-11202-32	SW-22	Total/NA	Solid	8021B	19234
880-11202-33	SW-23	Total/NA	Solid	8021B	19234
880-11202-34	SW-24	Total/NA	Solid	8021B	19234
880-11202-35	SW-34	Total/NA	Solid	8021B	19234
880-11202-36	SW-38	Total/NA	Solid	8021B	19234
880-11202-37	SW-39	Total/NA	Solid	8021B	19234
MB 880-19118/5-A	Method Blank	Total/NA	Solid	8021B	19118
MB 880-19232/5-A	Method Blank	Total/NA	Solid	8021B	19232
MB 880-19234/5-A	Method Blank	Total/NA	Solid	8021B	19234
LCS 880-19232/1-A	Lab Control Sample	Total/NA	Solid	8021B	19232
LCS 880-19234/1-A	Lab Control Sample	Total/NA	Solid	8021B	19234
LCSD 880-19232/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19232
LCSD 880-19234/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19234
880-11202-1 MS	SP-1	Total/NA	Solid	8021B	19232
880-11202-1 MSD	SP-1	Total/NA	Solid	8021B	19232
880-11202-27 MS	BH-98	Total/NA	Solid	8021B	19234
880-11202-27 MSD	BH-98	Total/NA	Solid	8021B	19234

Analysis Batch: 19117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-21	BH-92	Total/NA	Solid	8021B	19130
880-11202-22	BH-93	Total/NA	Solid	8021B	19130

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

GC VOA (Continued)

Analysis Batch: 19117 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-23	BH-94	Total/NA	Solid	8021B	19130
880-11202-24	BH-95	Total/NA	Solid	8021B	19130
880-11202-25	BH-96	Total/NA	Solid	8021B	19130
880-11202-26	BH-97	Total/NA	Solid	8021B	19130
MB 880-19023/5-A	Method Blank	Total/NA	Solid	8021B	19023
MB 880-19130/5-A	Method Blank	Total/NA	Solid	8021B	19130
LCS 880-19130/1-A	Lab Control Sample	Total/NA	Solid	8021B	19130
LCSD 880-19130/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	19130
880-11191-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	19130
880-11191-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	19130

Prep Batch: 19118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19118/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 19130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-21	BH-92	Total/NA	Solid	5035	
880-11202-22	BH-93	Total/NA	Solid	5035	
880-11202-23	BH-94	Total/NA	Solid	5035	
880-11202-24	BH-95	Total/NA	Solid	5035	
880-11202-25	BH-96	Total/NA	Solid	5035	
880-11202-26	BH-97	Total/NA	Solid	5035	
MB 880-19130/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19130/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19130/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11191-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-11191-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 19232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Total/NA	Solid	5035	
880-11202-2	SP-2	Total/NA	Solid	5035	
880-11202-3	SP-3	Total/NA	Solid	5035	
880-11202-4	SP-4	Total/NA	Solid	5035	
880-11202-5	SP-5	Total/NA	Solid	5035	
880-11202-6	SP-6	Total/NA	Solid	5035	
880-11202-7	SP-7	Total/NA	Solid	5035	
880-11202-8	BH-79	Total/NA	Solid	5035	
880-11202-9	BH-80	Total/NA	Solid	5035	
880-11202-10	BH-81	Total/NA	Solid	5035	
880-11202-11	BH-82	Total/NA	Solid	5035	
880-11202-12	BH-83	Total/NA	Solid	5035	
880-11202-13	BH-84	Total/NA	Solid	5035	
880-11202-14	BH-85	Total/NA	Solid	5035	
880-11202-15	BH-86	Total/NA	Solid	5035	
880-11202-16	BH-87	Total/NA	Solid	5035	
880-11202-17	BH-88	Total/NA	Solid	5035	
880-11202-18	BH-89	Total/NA	Solid	5035	
880-11202-19	BH-90	Total/NA	Solid	5035	
880-11202-20	BH-91	Total/NA	Solid	5035	

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

GC VOA (Continued)

Prep Batch: 19232 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-19232/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19232/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19232/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11202-1 MS	SP-1	Total/NA	Solid	5035	
880-11202-1 MSD	SP-1	Total/NA	Solid	5035	

Prep Batch: 19234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-27	BH-98	Total/NA	Solid	5035	
880-11202-28	BH-99	Total/NA	Solid	5035	
880-11202-29	SW-13	Total/NA	Solid	5035	
880-11202-30	SW-14	Total/NA	Solid	5035	
880-11202-31	SW-20	Total/NA	Solid	5035	
880-11202-32	SW-22	Total/NA	Solid	5035	
880-11202-33	SW-23	Total/NA	Solid	5035	
880-11202-34	SW-24	Total/NA	Solid	5035	
880-11202-35	SW-34	Total/NA	Solid	5035	
880-11202-36	SW-38	Total/NA	Solid	5035	
880-11202-37	SW-39	Total/NA	Solid	5035	
MB 880-19234/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-19234/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-19234/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11202-27 MS	BH-98	Total/NA	Solid	5035	
880-11202-27 MSD	BH-98	Total/NA	Solid	5035	

Analysis Batch: 19290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Total/NA	Solid	Total BTEX	
880-11202-2	SP-2	Total/NA	Solid	Total BTEX	
880-11202-3	SP-3	Total/NA	Solid	Total BTEX	
880-11202-4	SP-4	Total/NA	Solid	Total BTEX	
880-11202-5	SP-5	Total/NA	Solid	Total BTEX	
880-11202-6	SP-6	Total/NA	Solid	Total BTEX	
880-11202-7	SP-7	Total/NA	Solid	Total BTEX	
880-11202-8	BH-79	Total/NA	Solid	Total BTEX	
880-11202-9	BH-80	Total/NA	Solid	Total BTEX	
880-11202-10	BH-81	Total/NA	Solid	Total BTEX	
880-11202-11	BH-82	Total/NA	Solid	Total BTEX	
880-11202-12	BH-83	Total/NA	Solid	Total BTEX	
880-11202-13	BH-84	Total/NA	Solid	Total BTEX	
880-11202-14	BH-85	Total/NA	Solid	Total BTEX	
880-11202-15	BH-86	Total/NA	Solid	Total BTEX	
880-11202-16	BH-87	Total/NA	Solid	Total BTEX	
880-11202-17	BH-88	Total/NA	Solid	Total BTEX	
880-11202-18	BH-89	Total/NA	Solid	Total BTEX	
880-11202-19	BH-90	Total/NA	Solid	Total BTEX	
880-11202-20	BH-91	Total/NA	Solid	Total BTEX	
880-11202-27	BH-98	Total/NA	Solid	Total BTEX	
880-11202-28	BH-99	Total/NA	Solid	Total BTEX	
880-11202-29	SW-13	Total/NA	Solid	Total BTEX	
880-11202-30	SW-14	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

GC VOA (Continued)

Analysis Batch: 19290 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-31	SW-20	Total/NA	Solid	Total BTEX	
880-11202-32	SW-22	Total/NA	Solid	Total BTEX	
880-11202-33	SW-23	Total/NA	Solid	Total BTEX	
880-11202-34	SW-24	Total/NA	Solid	Total BTEX	
880-11202-35	SW-34	Total/NA	Solid	Total BTEX	
880-11202-36	SW-38	Total/NA	Solid	Total BTEX	
880-11202-37	SW-39	Total/NA	Solid	Total BTEX	

Analysis Batch: 19331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-21	BH-92	Total/NA	Solid	Total BTEX	
880-11202-22	BH-93	Total/NA	Solid	Total BTEX	
880-11202-23	BH-94	Total/NA	Solid	Total BTEX	
880-11202-24	BH-95	Total/NA	Solid	Total BTEX	
880-11202-25	BH-96	Total/NA	Solid	Total BTEX	
880-11202-26	BH-97	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 19177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-21	BH-92	Total/NA	Solid	8015NM Prep	
880-11202-22	BH-93	Total/NA	Solid	8015NM Prep	
880-11202-23	BH-94	Total/NA	Solid	8015NM Prep	
880-11202-24	BH-95	Total/NA	Solid	8015NM Prep	
880-11202-25	BH-96	Total/NA	Solid	8015NM Prep	

Prep Batch: 19181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Total/NA	Solid	8015NM Prep	
880-11202-2	SP-2	Total/NA	Solid	8015NM Prep	
880-11202-3	SP-3	Total/NA	Solid	8015NM Prep	
880-11202-4	SP-4	Total/NA	Solid	8015NM Prep	
880-11202-5	SP-5	Total/NA	Solid	8015NM Prep	
880-11202-6	SP-6	Total/NA	Solid	8015NM Prep	
880-11202-7	SP-7	Total/NA	Solid	8015NM Prep	
880-11202-8	BH-79	Total/NA	Solid	8015NM Prep	
880-11202-9	BH-80	Total/NA	Solid	8015NM Prep	
880-11202-10	BH-81	Total/NA	Solid	8015NM Prep	
880-11202-11	BH-82	Total/NA	Solid	8015NM Prep	
880-11202-12	BH-83	Total/NA	Solid	8015NM Prep	
880-11202-13	BH-84	Total/NA	Solid	8015NM Prep	
880-11202-14	BH-85	Total/NA	Solid	8015NM Prep	
880-11202-15	BH-86	Total/NA	Solid	8015NM Prep	
880-11202-16	BH-87	Total/NA	Solid	8015NM Prep	
880-11202-17	BH-88	Total/NA	Solid	8015NM Prep	
880-11202-18	BH-89	Total/NA	Solid	8015NM Prep	
880-11202-19	BH-90	Total/NA	Solid	8015NM Prep	
880-11202-20	BH-91	Total/NA	Solid	8015NM Prep	
MB 880-19181/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19181/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

GC Semi VOA (Continued)

Prep Batch: 19181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-19181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11202-1 MS	SP-1	Total/NA	Solid	8015NM Prep	
880-11202-1 MSD	SP-1	Total/NA	Solid	8015NM Prep	

Prep Batch: 19197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-26	BH-97	Total/NA	Solid	8015NM Prep	
MB 880-19197/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19197/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19197/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11203-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11203-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 19246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Total/NA	Solid	8015B NM	19181
880-11202-2	SP-2	Total/NA	Solid	8015B NM	19181
880-11202-3	SP-3	Total/NA	Solid	8015B NM	19181
880-11202-4	SP-4	Total/NA	Solid	8015B NM	19181
880-11202-5	SP-5	Total/NA	Solid	8015B NM	19181
880-11202-6	SP-6	Total/NA	Solid	8015B NM	19181
880-11202-7	SP-7	Total/NA	Solid	8015B NM	19181
880-11202-8	BH-79	Total/NA	Solid	8015B NM	19181
880-11202-9	BH-80	Total/NA	Solid	8015B NM	19181
880-11202-10	BH-81	Total/NA	Solid	8015B NM	19181
880-11202-11	BH-82	Total/NA	Solid	8015B NM	19181
880-11202-12	BH-83	Total/NA	Solid	8015B NM	19181
880-11202-13	BH-84	Total/NA	Solid	8015B NM	19181
880-11202-14	BH-85	Total/NA	Solid	8015B NM	19181
880-11202-15	BH-86	Total/NA	Solid	8015B NM	19181
880-11202-16	BH-87	Total/NA	Solid	8015B NM	19181
880-11202-17	BH-88	Total/NA	Solid	8015B NM	19181
880-11202-18	BH-89	Total/NA	Solid	8015B NM	19181
880-11202-19	BH-90	Total/NA	Solid	8015B NM	19181
880-11202-20	BH-91	Total/NA	Solid	8015B NM	19181
880-11202-21	BH-92	Total/NA	Solid	8015B NM	19177
880-11202-22	BH-93	Total/NA	Solid	8015B NM	19177
880-11202-23	BH-94	Total/NA	Solid	8015B NM	19177
880-11202-24	BH-95	Total/NA	Solid	8015B NM	19177
880-11202-25	BH-96	Total/NA	Solid	8015B NM	19177
MB 880-19181/1-A	Method Blank	Total/NA	Solid	8015B NM	19181
LCS 880-19181/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19181
LCSD 880-19181/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19181
880-11202-1 MS	SP-1	Total/NA	Solid	8015B NM	19181
880-11202-1 MSD	SP-1	Total/NA	Solid	8015B NM	19181

Analysis Batch: 19282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-26	BH-97	Total/NA	Solid	8015B NM	19197
MB 880-19197/1-A	Method Blank	Total/NA	Solid	8015B NM	19197
LCS 880-19197/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19197

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

GC Semi VOA (Continued)

Analysis Batch: 19282 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-19197/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19197
880-11203-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	19197
880-11203-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19197

Prep Batch: 19288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-37	SW-39	Total/NA	Solid	8015NM Prep	
MB 880-19288/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19288/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19288/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-1933-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-1933-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 19289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-27	BH-98	Total/NA	Solid	8015NM Prep	
880-11202-28	BH-99	Total/NA	Solid	8015NM Prep	
880-11202-29	SW-13	Total/NA	Solid	8015NM Prep	
880-11202-30	SW-14	Total/NA	Solid	8015NM Prep	
880-11202-31	SW-20	Total/NA	Solid	8015NM Prep	
880-11202-32	SW-22	Total/NA	Solid	8015NM Prep	
880-11202-33	SW-23	Total/NA	Solid	8015NM Prep	
880-11202-34	SW-24	Total/NA	Solid	8015NM Prep	
880-11202-35	SW-34	Total/NA	Solid	8015NM Prep	
880-11202-36	SW-38	Total/NA	Solid	8015NM Prep	
MB 880-19289/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-19289/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-19289/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11202-27 MS	BH-98	Total/NA	Solid	8015NM Prep	
880-11202-27 MSD	BH-98	Total/NA	Solid	8015NM Prep	

Analysis Batch: 19305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-37	SW-39	Total/NA	Solid	8015B NM	19288
MB 880-19288/1-A	Method Blank	Total/NA	Solid	8015B NM	19288
LCS 880-19288/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19288
LCSD 880-19288/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19288
890-1933-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	19288
890-1933-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	19288

Analysis Batch: 19306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-27	BH-98	Total/NA	Solid	8015B NM	19289
880-11202-28	BH-99	Total/NA	Solid	8015B NM	19289
880-11202-29	SW-13	Total/NA	Solid	8015B NM	19289
880-11202-30	SW-14	Total/NA	Solid	8015B NM	19289
880-11202-31	SW-20	Total/NA	Solid	8015B NM	19289
880-11202-32	SW-22	Total/NA	Solid	8015B NM	19289
880-11202-33	SW-23	Total/NA	Solid	8015B NM	19289
880-11202-34	SW-24	Total/NA	Solid	8015B NM	19289
880-11202-35	SW-34	Total/NA	Solid	8015B NM	19289

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

GC Semi VOA (Continued)

Analysis Batch: 19306 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-36	SW-38	Total/NA	Solid	8015B NM	19289
MB 880-19289/1-A	Method Blank	Total/NA	Solid	8015B NM	19289
LCS 880-19289/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	19289
LCSD 880-19289/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	19289
880-11202-27 MS	BH-98	Total/NA	Solid	8015B NM	19289
880-11202-27 MSD	BH-98	Total/NA	Solid	8015B NM	19289

Analysis Batch: 19491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Total/NA	Solid	8015 NM	
880-11202-2	SP-2	Total/NA	Solid	8015 NM	
880-11202-3	SP-3	Total/NA	Solid	8015 NM	
880-11202-4	SP-4	Total/NA	Solid	8015 NM	
880-11202-5	SP-5	Total/NA	Solid	8015 NM	
880-11202-6	SP-6	Total/NA	Solid	8015 NM	
880-11202-7	SP-7	Total/NA	Solid	8015 NM	
880-11202-8	BH-79	Total/NA	Solid	8015 NM	
880-11202-9	BH-80	Total/NA	Solid	8015 NM	
880-11202-10	BH-81	Total/NA	Solid	8015 NM	
880-11202-11	BH-82	Total/NA	Solid	8015 NM	
880-11202-12	BH-83	Total/NA	Solid	8015 NM	
880-11202-13	BH-84	Total/NA	Solid	8015 NM	
880-11202-14	BH-85	Total/NA	Solid	8015 NM	
880-11202-15	BH-86	Total/NA	Solid	8015 NM	
880-11202-16	BH-87	Total/NA	Solid	8015 NM	
880-11202-17	BH-88	Total/NA	Solid	8015 NM	
880-11202-18	BH-89	Total/NA	Solid	8015 NM	
880-11202-19	BH-90	Total/NA	Solid	8015 NM	
880-11202-20	BH-91	Total/NA	Solid	8015 NM	
880-11202-21	BH-92	Total/NA	Solid	8015 NM	
880-11202-22	BH-93	Total/NA	Solid	8015 NM	
880-11202-23	BH-94	Total/NA	Solid	8015 NM	
880-11202-24	BH-95	Total/NA	Solid	8015 NM	
880-11202-25	BH-96	Total/NA	Solid	8015 NM	
880-11202-27	BH-98	Total/NA	Solid	8015 NM	
880-11202-28	BH-99	Total/NA	Solid	8015 NM	
880-11202-29	SW-13	Total/NA	Solid	8015 NM	
880-11202-30	SW-14	Total/NA	Solid	8015 NM	
880-11202-31	SW-20	Total/NA	Solid	8015 NM	
880-11202-32	SW-22	Total/NA	Solid	8015 NM	
880-11202-33	SW-23	Total/NA	Solid	8015 NM	
880-11202-34	SW-24	Total/NA	Solid	8015 NM	
880-11202-35	SW-34	Total/NA	Solid	8015 NM	
880-11202-36	SW-38	Total/NA	Solid	8015 NM	

Analysis Batch: 19741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-26	BH-97	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

HPLC/IC

Leach Batch: 19431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Soluble	Solid	DI Leach	
880-11202-2	SP-2	Soluble	Solid	DI Leach	
880-11202-3	SP-3	Soluble	Solid	DI Leach	
880-11202-4	SP-4	Soluble	Solid	DI Leach	
880-11202-5	SP-5	Soluble	Solid	DI Leach	
880-11202-6	SP-6	Soluble	Solid	DI Leach	
880-11202-7	SP-7	Soluble	Solid	DI Leach	
880-11202-8	BH-79	Soluble	Solid	DI Leach	
880-11202-9	BH-80	Soluble	Solid	DI Leach	
880-11202-10	BH-81	Soluble	Solid	DI Leach	
880-11202-11	BH-82	Soluble	Solid	DI Leach	
880-11202-29	SW-13	Soluble	Solid	DI Leach	
880-11202-30	SW-14	Soluble	Solid	DI Leach	
880-11202-31	SW-20	Soluble	Solid	DI Leach	
880-11202-32	SW-22	Soluble	Solid	DI Leach	
880-11202-33	SW-23	Soluble	Solid	DI Leach	
880-11202-34	SW-24	Soluble	Solid	DI Leach	
880-11202-35	SW-34	Soluble	Solid	DI Leach	
880-11202-36	SW-38	Soluble	Solid	DI Leach	
880-11202-37	SW-39	Soluble	Solid	DI Leach	
MB 880-19431/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19431/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19431/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11202-1 MS	SP-1	Soluble	Solid	DI Leach	
880-11202-1 MSD	SP-1	Soluble	Solid	DI Leach	
880-11202-11 MS	BH-82	Soluble	Solid	DI Leach	
880-11202-11 MSD	BH-82	Soluble	Solid	DI Leach	

Leach Batch: 19432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-12	BH-83	Soluble	Solid	DI Leach	
880-11202-13	BH-84	Soluble	Solid	DI Leach	
880-11202-14	BH-85	Soluble	Solid	DI Leach	
880-11202-15	BH-86	Soluble	Solid	DI Leach	
880-11202-16	BH-87	Soluble	Solid	DI Leach	
880-11202-17	BH-88	Soluble	Solid	DI Leach	
880-11202-18	BH-89	Soluble	Solid	DI Leach	
880-11202-19	BH-90	Soluble	Solid	DI Leach	
880-11202-20	BH-91	Soluble	Solid	DI Leach	
880-11202-21	BH-92	Soluble	Solid	DI Leach	
880-11202-22	BH-93	Soluble	Solid	DI Leach	
880-11202-23	BH-94	Soluble	Solid	DI Leach	
880-11202-24	BH-95	Soluble	Solid	DI Leach	
880-11202-25	BH-96	Soluble	Solid	DI Leach	
880-11202-26	BH-97	Soluble	Solid	DI Leach	
880-11202-27	BH-98	Soluble	Solid	DI Leach	
880-11202-28	BH-99	Soluble	Solid	DI Leach	
MB 880-19432/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-19432/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-19432/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11202-12 MS	BH-83	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

HPLC/IC (Continued)

Leach Batch: 19432 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-12 MSD	BH-83	Soluble	Solid	DI Leach	
880-11202-22 MS	BH-93	Soluble	Solid	DI Leach	
880-11202-22 MSD	BH-93	Soluble	Solid	DI Leach	

Analysis Batch: 19879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-12	BH-83	Soluble	Solid	300.0	19432
880-11202-13	BH-84	Soluble	Solid	300.0	19432
880-11202-14	BH-85	Soluble	Solid	300.0	19432
880-11202-15	BH-86	Soluble	Solid	300.0	19432
880-11202-16	BH-87	Soluble	Solid	300.0	19432
880-11202-17	BH-88	Soluble	Solid	300.0	19432
880-11202-18	BH-89	Soluble	Solid	300.0	19432
880-11202-19	BH-90	Soluble	Solid	300.0	19432
880-11202-20	BH-91	Soluble	Solid	300.0	19432
880-11202-21	BH-92	Soluble	Solid	300.0	19432
880-11202-22	BH-93	Soluble	Solid	300.0	19432
880-11202-23	BH-94	Soluble	Solid	300.0	19432
880-11202-24	BH-95	Soluble	Solid	300.0	19432
880-11202-25	BH-96	Soluble	Solid	300.0	19432
880-11202-26	BH-97	Soluble	Solid	300.0	19432
880-11202-27	BH-98	Soluble	Solid	300.0	19432
880-11202-28	BH-99	Soluble	Solid	300.0	19432
MB 880-19432/1-A	Method Blank	Soluble	Solid	300.0	19432
LCS 880-19432/2-A	Lab Control Sample	Soluble	Solid	300.0	19432
LCSD 880-19432/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19432
880-11202-12 MS	BH-83	Soluble	Solid	300.0	19432
880-11202-12 MSD	BH-83	Soluble	Solid	300.0	19432
880-11202-22 MS	BH-93	Soluble	Solid	300.0	19432
880-11202-22 MSD	BH-93	Soluble	Solid	300.0	19432

Analysis Batch: 19881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-1	SP-1	Soluble	Solid	300.0	19431
880-11202-2	SP-2	Soluble	Solid	300.0	19431
880-11202-3	SP-3	Soluble	Solid	300.0	19431
880-11202-4	SP-4	Soluble	Solid	300.0	19431
880-11202-5	SP-5	Soluble	Solid	300.0	19431
880-11202-6	SP-6	Soluble	Solid	300.0	19431
880-11202-7	SP-7	Soluble	Solid	300.0	19431
880-11202-8	BH-79	Soluble	Solid	300.0	19431
880-11202-9	BH-80	Soluble	Solid	300.0	19431
880-11202-10	BH-81	Soluble	Solid	300.0	19431
880-11202-11	BH-82	Soluble	Solid	300.0	19431
880-11202-29	SW-13	Soluble	Solid	300.0	19431
880-11202-30	SW-14	Soluble	Solid	300.0	19431
880-11202-31	SW-20	Soluble	Solid	300.0	19431
880-11202-32	SW-22	Soluble	Solid	300.0	19431
880-11202-33	SW-23	Soluble	Solid	300.0	19431
880-11202-34	SW-24	Soluble	Solid	300.0	19431
880-11202-35	SW-34	Soluble	Solid	300.0	19431

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

HPLC/IC (Continued)

Analysis Batch: 19881 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-11202-36	SW-38	Soluble	Solid	300.0	19431
880-11202-37	SW-39	Soluble	Solid	300.0	19431
MB 880-19431/1-A	Method Blank	Soluble	Solid	300.0	19431
LCS 880-19431/2-A	Lab Control Sample	Soluble	Solid	300.0	19431
LCSD 880-19431/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	19431
880-11202-1 MS	SP-1	Soluble	Solid	300.0	19431
880-11202-1 MSD	SP-1	Soluble	Solid	300.0	19431
880-11202-11 MS	BH-82	Soluble	Solid	300.0	19431
880-11202-11 MSD	BH-82	Soluble	Solid	300.0	19431

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SP-1

Date Collected: 02/09/22 12:00
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 01:20	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 21:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 14:04	CH	XEN MID

Client Sample ID: SP-2

Date Collected: 02/09/22 12:02
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 01:46	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 22:05	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		10			19881	02/20/22 14:24	CH	XEN MID

Client Sample ID: SP-3

Date Collected: 02/09/22 12:04
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 02:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 22:26	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		5			19881	02/20/22 14:30	CH	XEN MID

Client Sample ID: SP-4

Date Collected: 02/09/22 12:06
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 02:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SP-4

Date Collected: 02/09/22 12:06
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 22:47	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 14:36	CH	XEN MID

Client Sample ID: SP-5

Date Collected: 02/09/22 12:08
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 03:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 23:08	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 14:43	CH	XEN MID

Client Sample ID: SP-6

Date Collected: 02/09/22 12:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 03:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 23:28	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 15:02	CH	XEN MID

Client Sample ID: SP-7

Date Collected: 02/09/22 12:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 03:59	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 23:47	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SP-7

Date Collected: 02/09/22 12:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 15:08	CH	XEN MID

Client Sample ID: BH-79

Date Collected: 02/08/22 08:00
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 04:26	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 00:08	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		5			19881	02/20/22 15:15	CH	XEN MID

Client Sample ID: BH-80

Date Collected: 02/08/22 08:02
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 04:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 00:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 15:21	CH	XEN MID

Client Sample ID: BH-81

Date Collected: 02/08/22 08:04
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 05:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 00:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 15:27	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-82

Date Collected: 02/08/22 08:06
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 07:08	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 01:30	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/21/22 12:56	CH	XEN MID

Client Sample ID: BH-83

Date Collected: 02/08/22 08:08
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 07:36	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 01:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		1			19879	02/20/22 12:49	CH	XEN MID

Client Sample ID: BH-84

Date Collected: 02/08/22 08:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 08:04	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 02:10	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		1			19879	02/20/22 13:15	CH	XEN MID

Client Sample ID: BH-85

Date Collected: 02/08/22 08:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 08:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-85
Date Collected: 02/08/22 08:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 02:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		5			19879	02/20/22 13:24	CH	XEN MID

Client Sample ID: BH-86
Date Collected: 02/08/22 08:14
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 09:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 02:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		5			19879	02/20/22 13:33	CH	XEN MID

Client Sample ID: BH-87
Date Collected: 02/08/22 08:16
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 09:28	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 03:10	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		5			19879	02/20/22 13:42	CH	XEN MID

Client Sample ID: BH-88
Date Collected: 02/08/22 08:18
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 09:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 03:31	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-88

Date Collected: 02/08/22 08:18
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		1			19879	02/20/22 14:09	CH	XEN MID

Client Sample ID: BH-89

Date Collected: 02/08/22 08:20
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 10:24	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 03:51	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		1			19879	02/20/22 14:17	CH	XEN MID

Client Sample ID: BH-90

Date Collected: 02/08/22 08:22
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 10:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 04:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		5			19879	02/20/22 14:26	CH	XEN MID

Client Sample ID: BH-91

Date Collected: 02/08/22 08:24
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	19232	02/12/22 09:52	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 11:18	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19181	02/11/22 15:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/14/22 04:32	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		10			19879	02/20/22 14:35	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-92
Date Collected: 02/08/22 08:26
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-21
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	19130	02/12/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19117	02/13/22 07:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19331	02/14/22 09:32	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19177	02/11/22 15:10	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 18:04	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		10			19879	02/20/22 14:44	CH	XEN MID

Client Sample ID: BH-93
Date Collected: 02/08/22 08:28
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-22
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19130	02/12/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19117	02/13/22 07:31	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19331	02/14/22 09:32	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19177	02/11/22 15:10	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 18:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		10			19879	02/20/22 14:53	CH	XEN MID

Client Sample ID: BH-94
Date Collected: 02/08/22 08:30
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19130	02/12/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19117	02/13/22 07:51	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19331	02/14/22 09:32	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19177	02/11/22 15:10	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 18:45	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		5			19879	02/20/22 15:19	CH	XEN MID

Client Sample ID: BH-95
Date Collected: 02/08/22 08:32
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-24
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19130	02/12/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19117	02/13/22 08:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19331	02/14/22 09:32	KL	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-95
Date Collected: 02/08/22 08:32
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-24
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19177	02/11/22 15:10	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 19:04	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		5			19879	02/20/22 15:28	CH	XEN MID

Client Sample ID: BH-96
Date Collected: 02/08/22 08:34
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-25
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	19130	02/12/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19117	02/13/22 08:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19331	02/14/22 09:32	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19177	02/11/22 15:10	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19246	02/13/22 19:24	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		1			19879	02/20/22 15:55	CH	XEN MID

Client Sample ID: BH-97
Date Collected: 02/08/22 08:36
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-26
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19130	02/12/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19117	02/13/22 08:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19331	02/14/22 09:32	KL	XEN MID
Total/NA	Analysis	8015 NM		1			19741	02/17/22 16:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19197	02/11/22 16:01	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19282	02/13/22 05:57	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		1			19879	02/20/22 16:04	CH	XEN MID

Client Sample ID: BH-98
Date Collected: 02/09/22 12:14
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 15:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 12:22	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: BH-98

Date Collected: 02/09/22 12:14
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		1			19879	02/20/22 16:12	CH	XEN MID

Client Sample ID: BH-99

Date Collected: 02/09/22 12:16
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-28
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 15:40	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 13:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19432	02/14/22 14:26	SC	XEN MID
Soluble	Analysis	300.0		5			19879	02/20/22 16:21	CH	XEN MID

Client Sample ID: SW-13

Date Collected: 02/08/22 09:00
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-29
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 16:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 13:49	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		5			19881	02/20/22 15:53	CH	XEN MID

Client Sample ID: SW-14

Date Collected: 02/08/22 09:15
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-30
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 16:32	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 14:10	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 15:59	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-20

Lab Sample ID: 880-11202-31

Date Collected: 02/08/22 09:45
Matrix: Solid
Date Received: 02/11/22 14:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 16:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 14:31	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 16:18	CH	XEN MID

Client Sample ID: SW-22

Lab Sample ID: 880-11202-32

Date Collected: 02/08/22 10:45
Matrix: Solid
Date Received: 02/11/22 14:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 17:23	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 14:52	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 16:24	CH	XEN MID

Client Sample ID: SW-23

Lab Sample ID: 880-11202-33

Date Collected: 02/08/22 10:50
Matrix: Solid
Date Received: 02/11/22 14:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 17:50	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 15:14	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 16:31	CH	XEN MID

Client Sample ID: SW-24

Lab Sample ID: 880-11202-34

Date Collected: 02/08/22 10:55
Matrix: Solid
Date Received: 02/11/22 14:47

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 18:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-24

Date Collected: 02/08/22 10:55
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-34
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 15:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 16:37	CH	XEN MID

Client Sample ID: SW-34

Date Collected: 02/08/22 14:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-35
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 18:43	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 15:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 16:43	CH	XEN MID

Client Sample ID: SW-38

Date Collected: 02/09/22 08:12
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-36
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 19:09	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Analysis	8015 NM		1			19491	02/15/22 12:34	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	19289	02/14/22 08:44	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19306	02/14/22 16:19	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 16:50	CH	XEN MID

Client Sample ID: SW-39

Date Collected: 02/07/22 14:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-37
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	19234	02/12/22 10:14	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	19027	02/13/22 20:52	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			19290	02/14/22 09:00	MR	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	19288	02/14/22 08:41	DM	XEN MID
Total/NA	Analysis	8015B NM		1			19305	02/14/22 15:05	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Client Sample ID: SW-39

Date Collected: 02/07/22 14:10
Date Received: 02/11/22 14:47

Lab Sample ID: 880-11202-37

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	19431	02/14/22 14:22	SC	XEN MID
Soluble	Analysis	300.0		1			19881	02/20/22 16:56	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc. Job ID: 880-11202-1
Project/Site: Mack PW SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW

Job ID: 880-11202-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-11202-1	SP-1	Solid	02/09/22 12:00	02/11/22 14:47
880-11202-2	SP-2	Solid	02/09/22 12:02	02/11/22 14:47
880-11202-3	SP-3	Solid	02/09/22 12:04	02/11/22 14:47
880-11202-4	SP-4	Solid	02/09/22 12:06	02/11/22 14:47
880-11202-5	SP-5	Solid	02/09/22 12:08	02/11/22 14:47
880-11202-6	SP-6	Solid	02/09/22 12:10	02/11/22 14:47
880-11202-7	SP-7	Solid	02/09/22 12:12	02/11/22 14:47
880-11202-8	BH-79	Solid	02/08/22 08:00	02/11/22 14:47
880-11202-9	BH-80	Solid	02/08/22 08:02	02/11/22 14:47
880-11202-10	BH-81	Solid	02/08/22 08:04	02/11/22 14:47
880-11202-11	BH-82	Solid	02/08/22 08:06	02/11/22 14:47
880-11202-12	BH-83	Solid	02/08/22 08:08	02/11/22 14:47
880-11202-13	BH-84	Solid	02/08/22 08:10	02/11/22 14:47
880-11202-14	BH-85	Solid	02/08/22 08:12	02/11/22 14:47
880-11202-15	BH-86	Solid	02/08/22 08:14	02/11/22 14:47
880-11202-16	BH-87	Solid	02/08/22 08:16	02/11/22 14:47
880-11202-17	BH-88	Solid	02/08/22 08:18	02/11/22 14:47
880-11202-18	BH-89	Solid	02/08/22 08:20	02/11/22 14:47
880-11202-19	BH-90	Solid	02/08/22 08:22	02/11/22 14:47
880-11202-20	BH-91	Solid	02/08/22 08:24	02/11/22 14:47
880-11202-21	BH-92	Solid	02/08/22 08:26	02/11/22 14:47
880-11202-22	BH-93	Solid	02/08/22 08:28	02/11/22 14:47
880-11202-23	BH-94	Solid	02/08/22 08:30	02/11/22 14:47
880-11202-24	BH-95	Solid	02/08/22 08:32	02/11/22 14:47
880-11202-25	BH-96	Solid	02/08/22 08:34	02/11/22 14:47
880-11202-26	BH-97	Solid	02/08/22 08:36	02/11/22 14:47
880-11202-27	BH-98	Solid	02/09/22 12:14	02/11/22 14:47
880-11202-28	BH-99	Solid	02/09/22 12:16	02/11/22 14:47
880-11202-29	SW-13	Solid	02/08/22 09:00	02/11/22 14:47
880-11202-30	SW-14	Solid	02/08/22 09:15	02/11/22 14:47
880-11202-31	SW-20	Solid	02/08/22 09:45	02/11/22 14:47
880-11202-32	SW-22	Solid	02/08/22 10:45	02/11/22 14:47
880-11202-33	SW-23	Solid	02/08/22 10:50	02/11/22 14:47
880-11202-34	SW-24	Solid	02/08/22 10:55	02/11/22 14:47
880-11202-35	SW-34	Solid	02/08/22 14:10	02/11/22 14:47
880-11202-36	SW-38	Solid	02/09/22 08:12	02/11/22 14:47
880-11202-37	SW-39	Solid	02/07/22 14:10	02/11/22 14:47

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No. 2396

CHAIN-OF-CUSTODY

2/22/2022

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 2/11/22 PAGE 1 OF 3

PO#: LAB WORK ORDER#: 11202

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: JR

TRRP report? ☐ Yes ☐ No

TIME ZONE: Time zone/State:

(S=SOIL) W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH ☐, ICE, UNPRESERVED

ANALYSES: BTEX ☒ MTBE ☐ BY 8021B; TRPH 418.1 ☐; TPH 1005 ☐; TPH 1006 ☐; GASOLINE MOD 8015 ☐; DIESEL - MOD 8015 ☐; OIL - MOD 8015 ☐; VOC 8260 ☐; SVOC 8270 ☐; PAH 8270 ☐; HOLDPAH ☐; 8081 PESTICIDES ☐; 8151 HERBICIDES ☐; 8082 PCBS ☐; TCLP - METALS (RCRA) ☐; TCLP VOC ☐; TCLP - PEST ☐; HERB ☐; Semi-VOC ☐; TOTAL METALS (RCRA) ☐; OTHER LIST ☐; LEAD - TOTAL ☐; D.W. 200.8 ☐; TCLP ☐; RCI ☐; TOX ☐; FLASHPOINT ☐; TDS ☐; TSS ☐; % MOISTURE ☐; CYANIDE ☐; pH ☐; HEXAVALENT CHROMIUM ☐; EXPLOSIVES ☐; PECHLORATE ☐; CHLORIDE ☒; ANIONS ☐; ALKALINITY ☐

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	FIELD NOTES
SP-1		2/9	12:00	S	1				X		
SP-2		2/9	12:02	S	1				X		
SP-3		2/9	12:04	S	1				X		
SP-4		2/9	12:06	S	1				X		
SP-5		2/9	12:08	S	1				X		
SP-6		2/9	12:10	S	1				X		
SP-7		2/9	12:12	S	1				X		
BH-79		2/8	8:00	S	1				X		
BH-80		2/8	8:02	S	1				X		
BH-81		2/8	8:04	S	1				X		
BH-82		2/8	8:06	S	1				X		
BH-83		2/8	8:08	S	1				X		
BH-84		2/8	8:10	S	1				X		
BH-85		2/8	8:17	S	1				X		
BH-86		2/8	8:14	S	1				X		
TOTAL 15											

880-11202 Chain of Custody

RELINQUISHED BY:(Signature) DATE/TIME 2/11/22 1400 RECEIVED BY:(Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: Xenco (Midland)

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: -10.0/10.1 THERM#: IR8
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

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Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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No. 2397

CHAIN-OF-CUSTODY

2/22/2022

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 2/11/22 PAGE 2 OF 3

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: Mack PW

LAI PROJECT #: 21-0105-04 COLLECTOR: JR

Data Reported to:

TRRP report? ☐ Yes ☐ No

S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

TIME ZONE: Time zone/State:

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESERVED	ANALYSES: BTEX By 8021B	TRPH 418.1	MTBE	GASOLINE MOD 8015	TPH 1005	TPH 1006	DIESEL - MOD 8015	OIL - MOD 8015	VOC 8260	SVOC 8270	PAH 8270	HOLDPAH	8081 PESTICIDES	8151 HERBICIDES	8082 PCBS	TCLP - METALS (RCRA)	TCLP VOC	TCLP - PEST	HERB	TOTAL METALS (RCRA)	Semi-VOC	LEAD - TOTAL	OTHER LIST	RCI	D.W. 200.8	TOX	TCLP	TDS	FLASHPOINT	TSS	% MOISTURE	pH	HEXAVALENT CHROMIUM	EXPLOSIVES	CYANIDE	CHLORIDE	PECHLORATE	ANIONS	ALKALINITY	FIELD NOTES
BH-87		2/8	8:16	S	1					X		X		X	X	X																													X							
BH-88		2/8	8:18	S	1					X		X		X	X	X																													X							
BH-89		2/8	8:20	S	1					X		X		X	X	X																													X							
BH-90		2/8	8:22	S	1					X		X		X	X	X																													X							
BH-91		2/8	8:24	S	1					X		X		X	X	X																													X							
BH-92		2/8	8:26	S	1					X		X		X	X	X																													X							
BH-93		2/8	8:28	S	1					X		X		X	X	X																													X							
BH-94		2/8	8:30	S	1					X		X		X	X	X																													X							
BH-95		2/8	8:32	S	1					X		X		X	X	X																													X							
BH-96		2/8	8:34	S	1					X		X		X	X	X																													X							
BH-97		2/8	8:36	S	1					X		X		X	X	X																													X							
BH-98		2/9	12:14	S	1					X		X		X	X	X																													X							
BH-99		2/9	12:16	S	1					X		X		X	X	X																													X							
SW-13		2/8	9:00	S	1					X		X		X	X	X																													X							
SW-14		2/8	9:15	S						X		X		X	X	X																													X							
TOTAL																																																				

RELINQUISHED BY:(Signature) DATE/TIME 1447 2/11/22 RECEIVED BY:(Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY:

TURN AROUND TIME
NORMAL ☑
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: _____ THERM#: _____
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # _____
☐ HAND DELIVERED

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Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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No. 2398

CHAIN-OF-CUSTODY

2/22/2022

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 2/11/22 PAGE 3 OF 3

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: Mack DW

LAI PROJECT #: 21-0105-04 COLLECTOR: JR

Data Reported to:

TRRP report? ☐ Yes ☐ No

TIME ZONE: Time zone/State:

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESERVED	ANALYSES: BTEX by EPA 8021B	TRPH 418.1	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	VOC 8260	SVOC 8270	8081 PESTICIDES	8082 PCBS	TCLP - METALS (RCRA)	TCLP - PEST	TOTAL METALS (RCRA)	LEAD - TOTAL	RCI	TDS	pH	EXPLOSIVES	CHLORIDE	FIELD NOTES
SW-20		2/8	9:45	S	1					X		X	X	X	X														X	
SW-22		2/8	10:45	S	1					X		X	X	X	X														X	
SW-23		2/8	10:50	S	1					X		X	X	X	X														X	
SW-24		2/8	10:55	S	1					X		X	X	X	X														X	
SW-34		2/8	14:10	S	1					X		X	X	X	X														X	
SW-38		2/9	8:12	S	1					X		X	X	X	X														X	
SW-39		2/7	14:10	S	1					X		X	X	X	X														X	

TOTAL 7

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Tia RB	2/11/22 14:57	[signature]
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)

LABORATORY: Xenco (Midland)

TURN AROUND TIME
NORMAL X
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: ____ THERM#: ____
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL # ____
☐ HAND DELIVERED

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Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-11202-1
SDG Number: 21-0105-04

Login Number: 11202
List Number: 1
Creator: Kramer, Jessica

List Source: Eurofins Midland

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2037-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW Release

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
3/9/2022 4:52:30 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Laboratory Job ID: 890-2037-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 890-2037-1
Project/Site: Mack PW Release SDG: 21-0105-04

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

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

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc. Job ID: 890-2037-1
Project/Site: Mack PW Release SDG: 21-0105-04

Job ID: 890-2037-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2037-1

Receipt
The samples were received on 3/2/2022 3:32 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 22.2°C

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-20809 and analytical batch 880-21039 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Released to Imaging: 6/17/2022 2:48:59 PM

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: SW-34 0-4.1

Lab Sample ID: 890-2037-1
Matrix: Solid
Date Collected: 03/02/22 08:43
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 03:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 03:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*03/04/22 16:00*	*03/05/22 03:15*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*03/04/22 16:00*	*03/05/22 03:15*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/22 20:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 04:18	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 04:18	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*107*		*70 - 130*	*03/04/22 14:51*	*03/06/22 04:18*	*1*
o-Terphenyl (Surr)	*105*		*70 - 130*	*03/04/22 14:51*	*03/06/22 04:18*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**46.0**		4.95		mg/Kg			03/09/22 00:03	1

Client Sample ID: SW-13 0-4.1

Lab Sample ID: 890-2037-2
Matrix: Solid
Date Collected: 03/02/22 10:57
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:35	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:35	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:35	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 03:35	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 03:35	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 03:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/04/22 16:00*	*03/05/22 03:35*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: SW-13 0-4.1

Lab Sample ID: 890-2037-2
Matrix: Solid

Date Collected: 03/02/22 10:57
Date Received: 03/02/22 15:32
Sample Depth: 4.1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/04/22 16:00*	*03/05/22 03:35*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/06/22 20:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		03/04/22 14:51	03/06/22 04:38	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		03/04/22 14:51	03/06/22 04:38	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		03/04/22 14:51	03/06/22 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*100*		*70 - 130*	*03/04/22 14:51*	*03/06/22 04:38*	*1*
o-Terphenyl (Surr)	*102*		*70 - 130*	*03/04/22 14:51*	*03/06/22 04:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**83.5**		5.05	mg/Kg			03/09/22 00:21	1

Client Sample ID: B-111 4.1

Lab Sample ID: 890-2037-3
Matrix: Solid

Date Collected: 03/02/22 12:37
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/04/22 16:00	03/05/22 03:56	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/04/22 16:00	03/05/22 03:56	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/04/22 16:00	03/05/22 03:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/04/22 16:00	03/05/22 03:56	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/04/22 16:00	03/05/22 03:56	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/04/22 16:00	03/05/22 03:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/04/22 16:00*	*03/05/22 03:56*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/04/22 16:00*	*03/05/22 03:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/06/22 20:37	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 890-2037-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: B-111 4.1 Lab Sample ID: 890-2037-3

Date Collected: 03/02/22 12:37 **Matrix: Solid**
Date Received: 03/02/22 15:32
Sample Depth: 4.1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 04:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 04:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 04:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*109*		*70 - 130*	*03/04/22 14:51*	*03/06/22 04:58*	*1*
o-Terphenyl (Surr)	*112*		*70 - 130*	*03/04/22 14:51*	*03/06/22 04:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**520**		4.95		mg/Kg			03/09/22 00:27	1

Client Sample ID: B-112 4.1 Lab Sample ID: 890-2037-4

Date Collected: 03/02/22 12:38 **Matrix: Solid**
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 04:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 04:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/04/22 16:00*	*03/05/22 04:16*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/04/22 16:00*	*03/05/22 04:16*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/22 20:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/04/22 14:51	03/06/22 05:19	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/22 14:51	03/06/22 05:19	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/22 14:51	03/06/22 05:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*109*		*70 - 130*	*03/04/22 14:51*	*03/06/22 05:19*	*1*
o-Terphenyl (Surr)	*107*		*70 - 130*	*03/04/22 14:51*	*03/06/22 05:19*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: B-112 4.1

Lab Sample ID: 890-2037-4
Matrix: Solid
Date Collected: 03/02/22 12:38
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1920		24.9		mg/Kg			03/09/22 00:33	5

Client Sample ID: B-113 4.1

Lab Sample ID: 890-2037-5
Matrix: Solid
Date Collected: 03/02/22 12:39
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:37	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:37	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:37	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 04:37	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:37	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 04:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*03/04/22 16:00*	*03/05/22 04:37*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/04/22 16:00*	*03/05/22 04:37*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/06/22 20:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/04/22 14:51	03/06/22 05:38	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/04/22 14:51	03/06/22 05:38	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/04/22 14:51	03/06/22 05:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*100*		*70 - 130*	*03/04/22 14:51*	*03/06/22 05:38*	*1*
o-Terphenyl (Surr)	*103*		*70 - 130*	*03/04/22 14:51*	*03/06/22 05:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3270		24.9		mg/Kg			03/09/22 00:39	5

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: B-114 4.1

Date Collected: 03/02/22 12:40
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Lab Sample ID: 890-2037-6

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:57	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:57	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:57	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 04:57	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 04:57	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 04:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/04/22 16:00*	*03/05/22 04:57*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/04/22 16:00*	*03/05/22 04:57*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/22 20:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 05:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 05:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 05:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*03/04/22 14:51*	*03/06/22 05:58*	*1*
o-Terphenyl (Surr)	*104*		*70 - 130*	*03/04/22 14:51*	*03/06/22 05:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**76.4**		4.95		mg/Kg			03/09/22 00:44	1

Client Sample ID: B-115 4.1

Date Collected: 03/02/22 12:41
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Lab Sample ID: 890-2037-7

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 05:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 05:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 05:18	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 05:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 16:00	03/05/22 05:18	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 16:00	03/05/22 05:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/04/22 16:00*	*03/05/22 05:18*	*1*

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 890-2037-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: B-115 4.1 Lab Sample ID: 890-2037-7

Date Collected: 03/02/22 12:41 **Matrix: Solid**
Date Received: 03/02/22 15:32
Sample Depth: 4.1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/04/22 16:00*	*03/05/22 05:18*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/22 20:37	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 06:19	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 06:19	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 14:51	03/06/22 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*106*		*70 - 130*	*03/04/22 14:51*	*03/06/22 06:19*	*1*
o-Terphenyl (Surr)	*107*		*70 - 130*	*03/04/22 14:51*	*03/06/22 06:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**67.8**		5.00		mg/Kg			03/09/22 00:50	1

Client Sample ID: SW-17 0-4.1 Lab Sample ID: 890-2037-8

Date Collected: 03/02/22 13:48 **Matrix: Solid**
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/04/22 16:00	03/05/22 05:38	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/04/22 16:00	03/05/22 05:38	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/04/22 16:00	03/05/22 05:38	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		03/04/22 16:00	03/05/22 05:38	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/04/22 16:00	03/05/22 05:38	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		03/04/22 16:00	03/05/22 05:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*03/04/22 16:00*	*03/05/22 05:38*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*03/04/22 16:00*	*03/05/22 05:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			03/06/22 20:58	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/22 20:37	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: SW-17 0-4.1

Date Collected: 03/02/22 13:48
Date Received: 03/02/22 15:32
Sample Depth: 4.1

Lab Sample ID: 890-2037-8

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 14:54	03/06/22 18:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 14:54	03/06/22 18:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 14:54	03/06/22 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*97*		*70 - 130*	*03/04/22 14:54*	*03/06/22 18:34*	*1*
o-Terphenyl (Surr)	*96*		*70 - 130*	*03/04/22 14:54*	*03/06/22 18:34*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**151**		5.00		mg/Kg			03/09/22 00:56	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-11985-A-1-C MS	Matrix Spike	100	102
880-11985-A-1-D MSD	Matrix Spike Duplicate	99	101
890-2037-1	SW-34 0-4.1	108	101
890-2037-2	SW-13 0-4.1	103	98
890-2037-3	B-111 4.1	102	97
890-2037-4	B-112 4.1	103	98
890-2037-5	B-113 4.1	104	97
890-2037-6	B-114 4.1	103	97
890-2037-7	B-115 4.1	103	97
890-2037-8	SW-17 0-4.1	107	99
LCS 880-20798/1-A	Lab Control Sample	102	102
LCSD 880-20798/2-A	Lab Control Sample Dup	99	101
MB 880-20668/5-A	Method Blank	104	95
MB 880-20798/5-A	Method Blank	97	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
820-3565-A-1-C MS	Matrix Spike	96	76
820-3565-A-1-D MSD	Matrix Spike Duplicate	97	79
890-2037-1	SW-34 0-4.1	107	105
890-2037-2	SW-13 0-4.1	100	102
890-2037-3	B-111 4.1	109	112
890-2037-4	B-112 4.1	109	107
890-2037-5	B-113 4.1	100	103
890-2037-6	B-114 4.1	102	104
890-2037-7	B-115 4.1	106	107
890-2037-8	SW-17 0-4.1	97	96
LCS 880-20922/2-A	Lab Control Sample	110	107
LCSD 880-20922/3-A	Lab Control Sample Dup	115	105
MB 880-20922/1-A	Method Blank	123	139 S1+

Surrogate Legend

1CO = 1-Chlorooctane (Surr)

OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-20668/5-A
Matrix: Solid
Analysis Batch: 20854

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20668

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 07:45	03/04/22 11:31	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 07:45	03/04/22 11:31	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 07:45	03/04/22 11:31	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 07:45	03/04/22 11:31	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 07:45	03/04/22 11:31	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 07:45	03/04/22 11:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*03/04/22 07:45*	*03/04/22 11:31*	*1*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/04/22 07:45*	*03/04/22 11:31*	*1*

Lab Sample ID: MB 880-20798/5-A
Matrix: Solid
Analysis Batch: 20854

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20798

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/03/22 16:00	03/04/22 22:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*03/03/22 16:00*	*03/04/22 22:26*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*03/03/22 16:00*	*03/04/22 22:26*	*1*

Lab Sample ID: LCS 880-20798/1-A
Matrix: Solid
Analysis Batch: 20854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20798

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1113		mg/Kg		111	70 - 130		
Toluene			0.100	0.1072		mg/Kg		107	70 - 130		
Ethylbenzene			0.100	0.1029		mg/Kg		103	70 - 130		
m-Xylene & p-Xylene			0.200	0.2112		mg/Kg		106	70 - 130		
o-Xylene			0.100	0.1033		mg/Kg		103	70 - 130		

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

Lab Sample ID: LCSD 880-20798/2-A
Matrix: Solid
Analysis Batch: 20854

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20798

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1057		mg/Kg		106	70 - 130	5	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-20798/2-A
Matrix: Solid
Analysis Batch: 20854

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20798

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.1010		mg/Kg		101	70 - 130	6	35
Ethylbenzene			0.100	0.09622		mg/Kg		96	70 - 130	7	35
m-Xylene & p-Xylene			0.200	0.1979		mg/Kg		99	70 - 130	7	35
o-Xylene			0.100	0.09729		mg/Kg		97	70 - 130	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-11985-A-1-C MS
Matrix: Solid
Analysis Batch: 20854

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20798

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00201	U	0.0998	0.1124		mg/Kg		113	70 - 130
Toluene	<0.00201	U	0.0998	0.1082		mg/Kg		108	70 - 130
Ethylbenzene	<0.00201	U	0.0998	0.1038		mg/Kg		104	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.200	0.2143		mg/Kg		107	70 - 130
o-Xylene	<0.00201	U	0.0998	0.1049		mg/Kg		105	70 - 130

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

Lab Sample ID: 880-11985-A-1-D MSD
Matrix: Solid
Analysis Batch: 20854

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20798

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00201	U	0.0996	0.1039		mg/Kg		104	70 - 130	8	35
Toluene	<0.00201	U	0.0996	0.09983		mg/Kg		100	70 - 130	8	35
Ethylbenzene	<0.00201	U	0.0996	0.09542		mg/Kg		96	70 - 130	8	35
m-Xylene & p-Xylene	<0.00402	U	0.199	0.1967		mg/Kg		99	70 - 130	9	35
o-Xylene	<0.00201	U	0.0996	0.09678		mg/Kg		97	70 - 130	8	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

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

Lab Sample ID: MB 880-20922/1-A
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20922

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 14:54	03/06/22 11:11	1

Eurofins Carlsbad

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-20922/1-A
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20922

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 14:54	03/06/22 11:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 14:54	03/06/22 11:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*123*		*70 - 130*	*03/04/22 14:54*	*03/06/22 11:11*	*1*
o-Terphenyl (Surr)	*139*	*S1+*	*70 - 130*	*03/04/22 14:54*	*03/06/22 11:11*	*1*

Lab Sample ID: LCS 880-20922/2-A
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20922

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1146		mg/Kg		115	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1000		mg/Kg		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*110*		*70 - 130*
o-Terphenyl (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 880-20922/3-A
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20922

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1195		mg/Kg		119	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	1015		mg/Kg		101	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*115*		*70 - 130*
o-Terphenyl (Surr)	*105*		*70 - 130*

Lab Sample ID: 820-3565-A-1-C MS
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20922

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	972.6		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1040		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*96*		*70 - 130*
o-Terphenyl (Surr)	*76*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

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

Lab Sample ID: 820-3565-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20971 — **Prep Batch: 20922**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	992.0		mg/Kg		99	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1073		mg/Kg		105	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*97*		*70 - 130*
o-Terphenyl (Surr)	*79*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-20809/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21039

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/08/22 21:59	1

Lab Sample ID: LCS 880-20809/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21039

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	259.2		mg/Kg		104	90 - 110		

Lab Sample ID: LCSD 880-20809/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21039

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	240.4		mg/Kg		96	90 - 110	7	20

Lab Sample ID: 880-11985-A-1-J MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21039

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	46.3	F1	253	332.1	F1	mg/Kg		113	90 - 110		

Lab Sample ID: 880-11985-A-1-K MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21039

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	46.3	F1	253	326.1	F1	mg/Kg		111	90 - 110	2	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2036-A-11-F MS
Matrix: Solid
Analysis Batch: 21039

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	2940	F1	2500	5824	F1	mg/Kg		115	90 - 110		

Lab Sample ID: 890-2036-A-11-G MSD
Matrix: Solid
Analysis Batch: 21039

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	2940	F1	2500	5821	F1	mg/Kg		115	90 - 110	0	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

GC VOA

Prep Batch: 20668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-20668/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 20798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Total/NA	Solid	5035	
890-2037-2	SW-13 0-4.1	Total/NA	Solid	5035	
890-2037-3	B-111 4.1	Total/NA	Solid	5035	
890-2037-4	B-112 4.1	Total/NA	Solid	5035	
890-2037-5	B-113 4.1	Total/NA	Solid	5035	
890-2037-6	B-114 4.1	Total/NA	Solid	5035	
890-2037-7	B-115 4.1	Total/NA	Solid	5035	
890-2037-8	SW-17 0-4.1	Total/NA	Solid	5035	
MB 880-20798/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-20798/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-20798/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11985-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-11985-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 20854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Total/NA	Solid	8021B	20798
890-2037-2	SW-13 0-4.1	Total/NA	Solid	8021B	20798
890-2037-3	B-111 4.1	Total/NA	Solid	8021B	20798
890-2037-4	B-112 4.1	Total/NA	Solid	8021B	20798
890-2037-5	B-113 4.1	Total/NA	Solid	8021B	20798
890-2037-6	B-114 4.1	Total/NA	Solid	8021B	20798
890-2037-7	B-115 4.1	Total/NA	Solid	8021B	20798
890-2037-8	SW-17 0-4.1	Total/NA	Solid	8021B	20798
MB 880-20668/5-A	Method Blank	Total/NA	Solid	8021B	20668
MB 880-20798/5-A	Method Blank	Total/NA	Solid	8021B	20798
LCS 880-20798/1-A	Lab Control Sample	Total/NA	Solid	8021B	20798
LCSD 880-20798/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	20798
880-11985-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	20798
880-11985-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	20798

Analysis Batch: 20997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Total/NA	Solid	Total BTEX	
890-2037-2	SW-13 0-4.1	Total/NA	Solid	Total BTEX	
890-2037-3	B-111 4.1	Total/NA	Solid	Total BTEX	
890-2037-4	B-112 4.1	Total/NA	Solid	Total BTEX	
890-2037-5	B-113 4.1	Total/NA	Solid	Total BTEX	
890-2037-6	B-114 4.1	Total/NA	Solid	Total BTEX	
890-2037-7	B-115 4.1	Total/NA	Solid	Total BTEX	
890-2037-8	SW-17 0-4.1	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 20921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc. Job ID: 890-2037-1
Project/Site: Mack PW Release SDG: 21-0105-04

GC Semi VOA (Continued)

Prep Batch: 20921 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-2	SW-13 0-4.1	Total/NA	Solid	8015NM Prep	
890-2037-3	B-111 4.1	Total/NA	Solid	8015NM Prep	
890-2037-4	B-112 4.1	Total/NA	Solid	8015NM Prep	
890-2037-5	B-113 4.1	Total/NA	Solid	8015NM Prep	
890-2037-6	B-114 4.1	Total/NA	Solid	8015NM Prep	
890-2037-7	B-115 4.1	Total/NA	Solid	8015NM Prep	

Prep Batch: 20922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-8	SW-17 0-4.1	Total/NA	Solid	8015NM Prep	
MB 880-20922/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-20922/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-20922/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
820-3565-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
820-3565-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 20957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Total/NA	Solid	8015B NM	20921
890-2037-2	SW-13 0-4.1	Total/NA	Solid	8015B NM	20921
890-2037-3	B-111 4.1	Total/NA	Solid	8015B NM	20921
890-2037-4	B-112 4.1	Total/NA	Solid	8015B NM	20921
890-2037-5	B-113 4.1	Total/NA	Solid	8015B NM	20921
890-2037-6	B-114 4.1	Total/NA	Solid	8015B NM	20921
890-2037-7	B-115 4.1	Total/NA	Solid	8015B NM	20921

Analysis Batch: 20971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-8	SW-17 0-4.1	Total/NA	Solid	8015B NM	20922
MB 880-20922/1-A	Method Blank	Total/NA	Solid	8015B NM	20922
LCS 880-20922/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	20922
LCSD 880-20922/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	20922
820-3565-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	20922
820-3565-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	20922

Analysis Batch: 20983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Total/NA	Solid	8015 NM	
890-2037-2	SW-13 0-4.1	Total/NA	Solid	8015 NM	
890-2037-3	B-111 4.1	Total/NA	Solid	8015 NM	
890-2037-4	B-112 4.1	Total/NA	Solid	8015 NM	
890-2037-5	B-113 4.1	Total/NA	Solid	8015 NM	
890-2037-6	B-114 4.1	Total/NA	Solid	8015 NM	
890-2037-7	B-115 4.1	Total/NA	Solid	8015 NM	
890-2037-8	SW-17 0-4.1	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 20809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

HPLC/IC (Continued)

Leach Batch: 20809 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-2	SW-13 0-4.1	Soluble	Solid	DI Leach	
890-2037-3	B-111 4.1	Soluble	Solid	DI Leach	
890-2037-4	B-112 4.1	Soluble	Solid	DI Leach	
890-2037-5	B-113 4.1	Soluble	Solid	DI Leach	
890-2037-6	B-114 4.1	Soluble	Solid	DI Leach	
890-2037-7	B-115 4.1	Soluble	Solid	DI Leach	
890-2037-8	SW-17 0-4.1	Soluble	Solid	DI Leach	
MB 880-20809/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-20809/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-20809/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-11985-A-1-J MS	Matrix Spike	Soluble	Solid	DI Leach	
880-11985-A-1-K MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
890-2036-A-11-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2036-A-11-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 21039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2037-1	SW-34 0-4.1	Soluble	Solid	300.0	20809
890-2037-2	SW-13 0-4.1	Soluble	Solid	300.0	20809
890-2037-3	B-111 4.1	Soluble	Solid	300.0	20809
890-2037-4	B-112 4.1	Soluble	Solid	300.0	20809
890-2037-5	B-113 4.1	Soluble	Solid	300.0	20809
890-2037-6	B-114 4.1	Soluble	Solid	300.0	20809
890-2037-7	B-115 4.1	Soluble	Solid	300.0	20809
890-2037-8	SW-17 0-4.1	Soluble	Solid	300.0	20809
MB 880-20809/1-A	Method Blank	Soluble	Solid	300.0	20809
LCS 880-20809/2-A	Lab Control Sample	Soluble	Solid	300.0	20809
LCSD 880-20809/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	20809
880-11985-A-1-J MS	Matrix Spike	Soluble	Solid	300.0	20809
880-11985-A-1-K MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	20809
890-2036-A-11-F MS	Matrix Spike	Soluble	Solid	300.0	20809
890-2036-A-11-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	20809

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: SW-34 0-4.1

Lab Sample ID: 890-2037-1

Date Collected: 03/02/22 08:43
Date Received: 03/02/22 15:32

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 03:15	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20921	03/04/22 14:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/06/22 04:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		1			21039	03/09/22 00:03	CH	XEN MID

Client Sample ID: SW-13 0-4.1

Lab Sample ID: 890-2037-2

Date Collected: 03/02/22 10:57
Date Received: 03/02/22 15:32

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 03:35	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20921	03/04/22 14:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/06/22 04:38	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		1			21039	03/09/22 00:21	CH	XEN MID

Client Sample ID: B-111 4.1

Lab Sample ID: 890-2037-3

Date Collected: 03/02/22 12:37
Date Received: 03/02/22 15:32

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 03:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20921	03/04/22 14:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/06/22 04:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		1			21039	03/09/22 00:27	CH	XEN MID

Client Sample ID: B-112 4.1

Lab Sample ID: 890-2037-4

Date Collected: 03/02/22 12:38
Date Received: 03/02/22 15:32

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 04:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: B-112 4.1

Lab Sample ID: 890-2037-4
Matrix: Solid
Date Collected: 03/02/22 12:38
Date Received: 03/02/22 15:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20921	03/04/22 14:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/06/22 05:19	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		5			21039	03/09/22 00:33	CH	XEN MID

Client Sample ID: B-113 4.1

Lab Sample ID: 890-2037-5
Matrix: Solid
Date Collected: 03/02/22 12:39
Date Received: 03/02/22 15:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 04:37	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	20921	03/04/22 14:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/06/22 05:38	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		5			21039	03/09/22 00:39	CH	XEN MID

Client Sample ID: B-114 4.1

Lab Sample ID: 890-2037-6
Matrix: Solid
Date Collected: 03/02/22 12:40
Date Received: 03/02/22 15:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 04:57	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	20921	03/04/22 14:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/06/22 05:58	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		1			21039	03/09/22 00:44	CH	XEN MID

Client Sample ID: B-115 4.1

Lab Sample ID: 890-2037-7
Matrix: Solid
Date Collected: 03/02/22 12:41
Date Received: 03/02/22 15:32

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 05:18	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20921	03/04/22 14:51	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/06/22 06:19	AJ	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Client Sample ID: B-115 4.1

Date Collected: 03/02/22 12:41
Date Received: 03/02/22 15:32

Lab Sample ID: 890-2037-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		1			21039	03/09/22 00:50	CH	XEN MID

Client Sample ID: SW-17 0-4.1

Date Collected: 03/02/22 13:48
Date Received: 03/02/22 15:32

Lab Sample ID: 890-2037-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	20798	03/04/22 16:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 05:38	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			20997	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20983	03/06/22 20:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20922	03/04/22 14:54	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20971	03/06/22 18:34	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	20809	03/03/22 12:16	CH	XEN MID
Soluble	Analysis	300.0		1			21039	03/09/22 00:56	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc. Job ID: 890-2037-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2037-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2037-1	SW-34 0-4.1	Solid	03/02/22 08:43	03/02/22 15:32	4.1
890-2037-2	SW-13 0-4.1	Solid	03/02/22 10:57	03/02/22 15:32	4.1
890-2037-3	B-111 4.1	Solid	03/02/22 12:37	03/02/22 15:32	4.1
890-2037-4	B-112 4.1	Solid	03/02/22 12:38	03/02/22 15:32	4.1
890-2037-5	B-113 4.1	Solid	03/02/22 12:39	03/02/22 15:32	4.1
890-2037-6	B-114 4.1	Solid	03/02/22 12:40	03/02/22 15:32	4.1
890-2037-7	B-115 4.1	Solid	03/02/22 12:41	03/02/22 15:32	4.1
890-2037-8	SW-17 0-4.1	Solid	03/02/22 13:48	03/02/22 15:32	4.1

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No. 2277

CHAIN-OF-CUSTODY

3/9/2022

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE: 3/2/2022 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE
Time zone/State: MST / NM

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESSERVED	ANALYSES: BTEX	MTBE	TRPH 418.1	TPH 1005	TPH 1006	GASOLINE MOD 8015	DIESEL - MOD 8015	OIL - MOD 8015	VOC 8260	SVOC 8270	PAH 8270	HOLDPAH	8081 PESTICIDES	8151 HERBICIDES	8082 PCBS	TCLP VOC	TCLP - METALS (RCRA)	TCLP - PEST	HERB	Semi-VOC	TOTAL METALS (RCRA)	OTHER LIST	LEAD - TOTAL	D W 200.8	TCLP	RCI	TOX	TDS	TSS	FLASHPOINT	pH	% MOISTURE	HEXAVALENT CHROMIUM	CYANIDE	EXPLOSIVES	PECHLORATE	CHLORIDE	ANIONS	ALKALINITY	FIELD NOTES
SW-34 0-4.1		3/2/22	0843	S	1					X		X			X	X	X																																			
SW-13 0-4.1		3/2/22	1057	S	1					X		X			X	X	X																																			
B-111 4.1'		3/2/22	1237	S	1					X		X			X	X	X																																		
B-112 4.1		3/2/22	1238	S	1					X		X			X	X	X																																		
B-113 4.1		3/2/22	1239	S	1					X		X			X	X	X																																		
B-114 4.1'		3/2/22	1240	S	1					X		X			X	X	X																																		
B-115 4.1		3/2/22	1241	S	1					X		X			X	X	X																																		
SW-17 0-4.1'		3/2/22	1348	S	1					X		X			X	X	X																																		

TOTAL 8

890-2037 Chain of Custody

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME 3.2.22 1532	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY XENCO

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP: 20.4/22.2 THERM# -0.2 TNM-007
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL # CIP-Cooling In Process
☒ HAND DELIVERED

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Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 890-2037-1
SDG Number: 21-0105-04

Login Number: 2037
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 890-2037-1
SDG Number: 21-0105-04

Login Number: 2037
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 03/04/22 11:48 AM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2041-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW Release

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
3/10/2022 4:02:29 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS
Review your project results through TotalAccess
Have a Question? Ask The Expert
Visit us at: www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Laboratory Job ID: 890-2041-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 890-2041-1
Project/Site: Mack PW Release SDG: 21-0105-04

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Job ID: 890-2041-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2041-1

Receipt
The samples were received on 3/3/2022 3:38 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 9.4°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-20897 and analytical batch 880-20859 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

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

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Client Sample ID: SW-19 0-4.1'

Lab Sample ID: 890-2041-1
Matrix: Solid
Date Collected: 03/03/22 08:15
Date Received: 03/03/22 15:38
Sample Depth: 0 - 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 18:38	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 18:38	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 18:38	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/04/22 12:13	03/06/22 18:38	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 18:38	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/04/22 12:13	03/06/22 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*03/04/22 12:13*	*03/06/22 18:38*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/04/22 12:13*	*03/06/22 18:38*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/08/22 06:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/07/22 17:48	03/07/22 22:13	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/07/22 17:48	03/07/22 22:13	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/07/22 17:48	03/07/22 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*94*		*70 - 130*	*03/07/22 17:48*	*03/07/22 22:13*	*1*
o-Terphenyl (Surr)	*89*		*70 - 130*	*03/07/22 17:48*	*03/07/22 22:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**84.2**		4.96		mg/Kg			03/09/22 18:32	1

Client Sample ID: SW-22 0-4.1'

Lab Sample ID: 890-2041-2
Matrix: Solid
Date Collected: 03/03/22 11:23
Date Received: 03/03/22 15:38
Sample Depth: 0 - 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 18:58	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 18:58	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 18:58	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/04/22 12:13	03/06/22 18:58	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 18:58	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/04/22 12:13	03/06/22 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/04/22 12:13*	*03/06/22 18:58*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Client Sample ID: SW-22 0-4.1'

Lab Sample ID: 890-2041-2
Matrix: Solid
Date Collected: 03/03/22 11:23
Date Received: 03/03/22 15:38
Sample Depth: 0 - 4.1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*95*		*70 - 130*	*03/04/22 12:13*	*03/06/22 18:58*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403	mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0	mg/Kg			03/08/22 06:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/07/22 17:48	03/07/22 23:16	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		03/07/22 17:48	03/07/22 23:16	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		03/07/22 17:48	03/07/22 23:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*111*		*70 - 130*	*03/07/22 17:48*	*03/07/22 23:16*	*1*
o-Terphenyl (Surr)	*111*		*70 - 130*	*03/07/22 17:48*	*03/07/22 23:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.8**		5.00	mg/Kg			03/09/22 18:38	1

Client Sample ID: B-116 4.1'

Lab Sample ID: 890-2041-3
Matrix: Solid
Date Collected: 03/03/22 12:30
Date Received: 03/03/22 15:38
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202	mg/Kg		03/04/22 12:13	03/06/22 19:19	1
Toluene	<0.00202	U	0.00202	mg/Kg		03/04/22 12:13	03/06/22 19:19	1
Ethylbenzene	<0.00202	U	0.00202	mg/Kg		03/04/22 12:13	03/06/22 19:19	1
m-Xylene & p-Xylene	<0.00404	U	0.00404	mg/Kg		03/04/22 12:13	03/06/22 19:19	1
o-Xylene	<0.00202	U	0.00202	mg/Kg		03/04/22 12:13	03/06/22 19:19	1
Xylenes, Total	<0.00404	U	0.00404	mg/Kg		03/04/22 12:13	03/06/22 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*	*03/04/22 12:13*	*03/06/22 19:19*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*03/04/22 12:13*	*03/06/22 19:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404	mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			03/08/22 06:22	1

Eurofins Carlsbad

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 890-2041-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: B-116 4.1' Lab Sample ID: 890-2041-3

Date Collected: 03/03/22 12:30 **Matrix: Solid**
Date Received: 03/03/22 15:38
Sample Depth: 4.1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/07/22 17:48	03/07/22 23:36	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/07/22 17:48	03/07/22 23:36	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/07/22 17:48	03/07/22 23:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*104*		*70 - 130*	*03/07/22 17:48*	*03/07/22 23:36*	*1*
o-Terphenyl (Surr)	*105*		*70 - 130*	*03/07/22 17:48*	*03/07/22 23:36*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14100**		250		mg/Kg			03/09/22 18:44	50

Client Sample ID: B-117 4.1' Lab Sample ID: 890-2041-4

Date Collected: 03/03/22 12:33 **Matrix: Solid**
Date Received: 03/03/22 15:38
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 19:39	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 19:39	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 19:39	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/04/22 12:13	03/06/22 19:39	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/04/22 12:13	03/06/22 19:39	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/04/22 12:13	03/06/22 19:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*03/04/22 12:13*	*03/06/22 19:39*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*03/04/22 12:13*	*03/06/22 19:39*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**239**		49.8		mg/Kg			03/08/22 06:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/07/22 17:48	03/07/22 23:57	1
Diesel Range Organics (Over C10-C28)	**239**		49.8		mg/Kg		03/07/22 17:48	03/07/22 23:57	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/07/22 17:48	03/07/22 23:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*109*		*70 - 130*	*03/07/22 17:48*	*03/07/22 23:57*	*1*
o-Terphenyl (Surr)	*108*		*70 - 130*	*03/07/22 17:48*	*03/07/22 23:57*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Client Sample ID: B-117 4.1'

Lab Sample ID: 890-2041-4
Matrix: Solid
Date Collected: 03/03/22 12:33
Date Received: 03/03/22 15:38
Sample Depth: 4.1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2080**		49.6		mg/Kg			03/09/22 18:50	10

Client Sample ID: B-118 4.1

Lab Sample ID: 890-2041-5
Matrix: Solid
Date Collected: 03/03/22 12:34
Date Received: 03/03/22 15:38
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/04/22 12:13	03/06/22 20:00	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/04/22 12:13	03/06/22 20:00	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/04/22 12:13	03/06/22 20:00	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/04/22 12:13	03/06/22 20:00	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/04/22 12:13	03/06/22 20:00	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/04/22 12:13	03/06/22 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*03/04/22 12:13*	*03/06/22 20:00*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*03/04/22 12:13*	*03/06/22 20:00*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**50.1**		50.0		mg/Kg			03/08/22 06:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/08/22 00:17	1
Diesel Range Organics (Over C10-C28)	**50.1**		50.0		mg/Kg		03/07/22 17:48	03/08/22 00:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/08/22 00:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*108*		*70 - 130*	*03/07/22 17:48*	*03/08/22 00:17*	*1*
o-Terphenyl (Surr)	*110*		*70 - 130*	*03/07/22 17:48*	*03/08/22 00:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3240**		49.7		mg/Kg			03/09/22 18:56	10

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 890-2041-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: B-119 4.1 Lab Sample ID: 890-2041-6

Date Collected: 03/03/22 12:35 **Matrix: Solid**
Date Received: 03/03/22 15:38
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 20:20	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 20:20	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 20:20	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/04/22 12:13	03/06/22 20:20	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/04/22 12:13	03/06/22 20:20	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/04/22 12:13	03/06/22 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*03/04/22 12:13*	*03/06/22 20:20*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*03/04/22 12:13*	*03/06/22 20:20*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/08/22 06:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/08/22 00:37	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/08/22 00:37	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/08/22 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*105*		*70 - 130*	*03/07/22 17:48*	*03/08/22 00:37*	*1*
o-Terphenyl (Surr)	*108*		*70 - 130*	*03/07/22 17:48*	*03/08/22 00:37*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1350**		24.8		mg/Kg			03/09/22 19:01	5

Client Sample ID: B-120 4.1 Lab Sample ID: 890-2041-7

Date Collected: 03/03/22 12:36 **Matrix: Solid**
Date Received: 03/03/22 15:38
Sample Depth: 4.1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 20:41	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 20:41	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 20:41	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 12:13	03/06/22 20:41	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 20:41	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 12:13	03/06/22 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*03/04/22 12:13*	*03/06/22 20:41*	*1*

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Client Sample ID: B-120 4.1
Date Collected: 03/03/22 12:36
Date Received: 03/03/22 15:38
Sample Depth: 4.1

Lab Sample ID: 890-2041-7
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/04/22 12:13*	*03/06/22 20:41*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/08/22 06:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/07/22 17:48	03/08/22 00:58	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/07/22 17:48	03/08/22 00:58	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/07/22 17:48	03/08/22 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*103*		*70 - 130*	*03/07/22 17:48*	*03/08/22 00:58*	*1*
o-Terphenyl (Surr)	*105*		*70 - 130*	*03/07/22 17:48*	*03/08/22 00:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1520**		24.9		mg/Kg			03/10/22 08:46	5

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-12045-A-1-G MS	Matrix Spike	109	100
880-12045-A-1-H MSD	Matrix Spike Duplicate	102	91
890-2041-1	SW-19 0-4.1'	109	93
890-2041-2	SW-22 0-4.1'	103	95
890-2041-3	B-116 4.1'	107	96
890-2041-4	B-117 4.1'	115	105
890-2041-5	B-118 4.1	109	102
890-2041-6	B-119 4.1	101	91
890-2041-7	B-120 4.1	95	92
LCS 880-20897/1-A	Lab Control Sample	98	101
LCSD 880-20897/2-A	Lab Control Sample Dup	93	99
MB 880-20895/5-A	Method Blank	96	99
MB 880-20897/5-A	Method Blank	95	98

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2041-1	SW-19 0-4.1'	94	89
890-2041-1 MS	SW-19 0-4.1'	114	98
890-2041-1 MSD	SW-19 0-4.1'	117	99
890-2041-2	SW-22 0-4.1'	111	111
890-2041-3	B-116 4.1'	104	105
890-2041-4	B-117 4.1'	109	108
890-2041-5	B-118 4.1	108	110
890-2041-6	B-119 4.1	105	108
890-2041-7	B-120 4.1	103	105
LCS 880-21055/2-A	Lab Control Sample	113	100
LCSD 880-21055/3-A	Lab Control Sample Dup	109	95
MB 880-21055/1-A	Method Blank	104	107

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-20895/5-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20895

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:01	03/05/22 23:43	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:01	03/05/22 23:43	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:01	03/05/22 23:43	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 12:01	03/05/22 23:43	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:01	03/05/22 23:43	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 12:01	03/05/22 23:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*03/04/22 12:01*	*03/05/22 23:43*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*03/04/22 12:01*	*03/05/22 23:43*	*1*

Lab Sample ID: MB 880-20897/5-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20897

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 12:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 12:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 12:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 12:13	03/06/22 12:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 12:13	03/06/22 12:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 12:13	03/06/22 12:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*03/04/22 12:13*	*03/06/22 12:14*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/04/22 12:13*	*03/06/22 12:14*	*1*

Lab Sample ID: LCS 880-20897/1-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20897

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09933		mg/Kg		99	70 - 130		
Toluene			0.100	0.09243		mg/Kg		92	70 - 130		
Ethylbenzene			0.100	0.09086		mg/Kg		91	70 - 130		
m-Xylene & p-Xylene			0.200	0.2096		mg/Kg		105	70 - 130		
o-Xylene			0.100	0.1047		mg/Kg		105	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-20897/2-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20897

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09635		mg/Kg		96	70 - 130	3	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-20897/2-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20897

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene			0.100	0.08993		mg/Kg		90	70 - 130	3	35
Ethylbenzene			0.100	0.08884		mg/Kg		89	70 - 130	2	35
m-Xylene & p-Xylene			0.200	0.2060		mg/Kg		103	70 - 130	2	35
o-Xylene			0.100	0.1022		mg/Kg		102	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: 880-12045-A-1-G MS
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20897

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U F2 F1	0.100	0.08109		mg/Kg		81	70 - 130
Toluene	<0.00199	U F2 F1	0.100	0.07895		mg/Kg		78	70 - 130
Ethylbenzene	<0.00199	U F2 F1	0.100	0.07751		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.200	0.1812		mg/Kg		90	70 - 130
o-Xylene	<0.00199	U F2 F1	0.100	0.09085		mg/Kg		91	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*

Lab Sample ID: 880-12045-A-1-H MSD
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20897

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F2 F1	0.0990	0.04204	F2 F1	mg/Kg		42	70 - 130	63	35
Toluene	<0.00199	U F2 F1	0.0990	0.04813	F2 F1	mg/Kg		48	70 - 130	48	35
Ethylbenzene	<0.00199	U F2 F1	0.0990	0.05190	F2 F1	mg/Kg		52	70 - 130	40	35
m-Xylene & p-Xylene	<0.00398	U F2 F1	0.198	0.1189	F2 F1	mg/Kg		60	70 - 130	41	35
o-Xylene	<0.00199	U F2 F1	0.0990	0.06181	F2 F1	mg/Kg		62	70 - 130	38	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

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

Lab Sample ID: MB 880-21055/1-A
Matrix: Solid
Analysis Batch: 21016

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21055

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/07/22 21:09	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-21055/1-A
Matrix: Solid
Analysis Batch: 21016

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21055

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/07/22 21:09	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/07/22 17:48	03/07/22 21:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*104*		*70 - 130*	*03/07/22 17:48*	*03/07/22 21:09*	*1*
o-Terphenyl (Surr)	*107*		*70 - 130*	*03/07/22 17:48*	*03/07/22 21:09*	*1*

Lab Sample ID: LCS 880-21055/2-A
Matrix: Solid
Analysis Batch: 21016

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21055

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1244		mg/Kg		124	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1015		mg/Kg		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*113*		*70 - 130*
o-Terphenyl (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 880-21055/3-A
Matrix: Solid
Analysis Batch: 21016

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21055

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1191		mg/Kg		119	70 - 130	4	20
Diesel Range Organics (Over C10-C28)			1000	953.6		mg/Kg		95	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*109*		*70 - 130*
o-Terphenyl (Surr)	*95*		*70 - 130*

Lab Sample ID: 890-2041-1 MS
Matrix: Solid
Analysis Batch: 21016

Client Sample ID: SW-19 0-4.1'
Prep Type: Total/NA
Prep Batch: 21055

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	1165		mg/Kg		113	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	998	851.0		mg/Kg		82	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*114*		*70 - 130*
o-Terphenyl (Surr)	*98*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

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

Lab Sample ID: 890-2041-1 MSD
Matrix: Solid
Analysis Batch: 21016

Client Sample ID: SW-19 0-4.1'
Prep Type: Total/NA
Prep Batch: 21055

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	1202		mg/Kg		117	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.8	U	998	872.5		mg/Kg		84	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*117*		*70 - 130*
o-Terphenyl (Surr)	*99*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-21026/1-A
Matrix: Solid
Analysis Batch: 21137

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/09/22 15:48	1

Lab Sample ID: LCS 880-21026/2-A
Matrix: Solid
Analysis Batch: 21137

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	231.2		mg/Kg		92	90 - 110		

Lab Sample ID: LCSD 880-21026/3-A
Matrix: Solid
Analysis Batch: 21137

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	243.8		mg/Kg		98	90 - 110	5	20

Lab Sample ID: 890-2040-A-17-D MS
Matrix: Solid
Analysis Batch: 21137

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	10.4		250	281.4		mg/Kg		108	90 - 110		

Lab Sample ID: 890-2040-A-17-E MSD
Matrix: Solid
Analysis Batch: 21137

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.4		250	273.4		mg/Kg		105	90 - 110	3	20

QC Sample Results

Client: Larson & Associates, Inc. Job ID: 890-2041-1
Project/Site: Mack PW Release SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 880-21027/1-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 21142

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/09/22 19:43	1

Lab Sample ID: LCS 880-21027/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 21142

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	244.3		mg/Kg		98	90 - 110		

Lab Sample ID: LCSD 880-21027/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 21142

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	243.9		mg/Kg		98	90 - 110	0	20

Lab Sample ID: 880-12040-A-9-F MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 21142

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1390		5000	6573		mg/Kg		104	90 - 110		

Lab Sample ID: 880-12040-A-9-G MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Soluble**
Analysis Batch: 21142

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1390		5000	6416		mg/Kg		100	90 - 110	2	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

GC VOA

Analysis Batch: 20859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Total/NA	Solid	8021B	20897
890-2041-2	SW-22 0-4.1'	Total/NA	Solid	8021B	20897
890-2041-3	B-116 4.1'	Total/NA	Solid	8021B	20897
890-2041-4	B-117 4.1'	Total/NA	Solid	8021B	20897
890-2041-5	B-118 4.1	Total/NA	Solid	8021B	20897
890-2041-6	B-119 4.1	Total/NA	Solid	8021B	20897
890-2041-7	B-120 4.1	Total/NA	Solid	8021B	20897
MB 880-20895/5-A	Method Blank	Total/NA	Solid	8021B	20895
MB 880-20897/5-A	Method Blank	Total/NA	Solid	8021B	20897
LCS 880-20897/1-A	Lab Control Sample	Total/NA	Solid	8021B	20897
LCSD 880-20897/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	20897
880-12045-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	20897
880-12045-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	20897

Prep Batch: 20895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-20895/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 20897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Total/NA	Solid	5035	
890-2041-2	SW-22 0-4.1'	Total/NA	Solid	5035	
890-2041-3	B-116 4.1'	Total/NA	Solid	5035	
890-2041-4	B-117 4.1'	Total/NA	Solid	5035	
890-2041-5	B-118 4.1	Total/NA	Solid	5035	
890-2041-6	B-119 4.1	Total/NA	Solid	5035	
890-2041-7	B-120 4.1	Total/NA	Solid	5035	
MB 880-20897/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-20897/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-20897/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12045-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
880-12045-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 21018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Total/NA	Solid	Total BTEX	
890-2041-2	SW-22 0-4.1'	Total/NA	Solid	Total BTEX	
890-2041-3	B-116 4.1'	Total/NA	Solid	Total BTEX	
890-2041-4	B-117 4.1'	Total/NA	Solid	Total BTEX	
890-2041-5	B-118 4.1	Total/NA	Solid	Total BTEX	
890-2041-6	B-119 4.1	Total/NA	Solid	Total BTEX	
890-2041-7	B-120 4.1	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 21016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Total/NA	Solid	8015B NM	21055
890-2041-2	SW-22 0-4.1'	Total/NA	Solid	8015B NM	21055
890-2041-3	B-116 4.1'	Total/NA	Solid	8015B NM	21055
890-2041-4	B-117 4.1'	Total/NA	Solid	8015B NM	21055

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

GC Semi VOA (Continued)

Analysis Batch: 21016 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-5	B-118 4.1	Total/NA	Solid	8015B NM	21055
890-2041-6	B-119 4.1	Total/NA	Solid	8015B NM	21055
890-2041-7	B-120 4.1	Total/NA	Solid	8015B NM	21055
MB 880-21055/1-A	Method Blank	Total/NA	Solid	8015B NM	21055
LCS 880-21055/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21055
LCSD 880-21055/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21055
890-2041-1 MS	SW-19 0-4.1'	Total/NA	Solid	8015B NM	21055
890-2041-1 MSD	SW-19 0-4.1'	Total/NA	Solid	8015B NM	21055

Prep Batch: 21055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Total/NA	Solid	8015NM Prep	
890-2041-2	SW-22 0-4.1'	Total/NA	Solid	8015NM Prep	
890-2041-3	B-116 4.1'	Total/NA	Solid	8015NM Prep	
890-2041-4	B-117 4.1'	Total/NA	Solid	8015NM Prep	
890-2041-5	B-118 4.1	Total/NA	Solid	8015NM Prep	
890-2041-6	B-119 4.1	Total/NA	Solid	8015NM Prep	
890-2041-7	B-120 4.1	Total/NA	Solid	8015NM Prep	
MB 880-21055/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21055/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21055/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2041-1 MS	SW-19 0-4.1'	Total/NA	Solid	8015NM Prep	
890-2041-1 MSD	SW-19 0-4.1'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 21100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Total/NA	Solid	8015 NM	
890-2041-2	SW-22 0-4.1'	Total/NA	Solid	8015 NM	
890-2041-3	B-116 4.1'	Total/NA	Solid	8015 NM	
890-2041-4	B-117 4.1'	Total/NA	Solid	8015 NM	
890-2041-5	B-118 4.1	Total/NA	Solid	8015 NM	
890-2041-6	B-119 4.1	Total/NA	Solid	8015 NM	
890-2041-7	B-120 4.1	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 21026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Soluble	Solid	DI Leach	
890-2041-2	SW-22 0-4.1'	Soluble	Solid	DI Leach	
890-2041-3	B-116 4.1'	Soluble	Solid	DI Leach	
890-2041-4	B-117 4.1'	Soluble	Solid	DI Leach	
890-2041-5	B-118 4.1	Soluble	Solid	DI Leach	
890-2041-6	B-119 4.1	Soluble	Solid	DI Leach	
MB 880-21026/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21026/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21026/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2040-A-17-D MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2040-A-17-E MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

HPLC/IC

Leach Batch: 21027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-7	B-120 4.1	Soluble	Solid	DI Leach	
MB 880-21027/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21027/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21027/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12040-A-9-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12040-A-9-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 21137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-1	SW-19 0-4.1'	Soluble	Solid	300.0	21026
890-2041-2	SW-22 0-4.1'	Soluble	Solid	300.0	21026
890-2041-3	B-116 4.1'	Soluble	Solid	300.0	21026
890-2041-4	B-117 4.1'	Soluble	Solid	300.0	21026
890-2041-5	B-118 4.1	Soluble	Solid	300.0	21026
890-2041-6	B-119 4.1	Soluble	Solid	300.0	21026
MB 880-21026/1-A	Method Blank	Soluble	Solid	300.0	21026
LCS 880-21026/2-A	Lab Control Sample	Soluble	Solid	300.0	21026
LCSD 880-21026/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21026
890-2040-A-17-D MS	Matrix Spike	Soluble	Solid	300.0	21026
890-2040-A-17-E MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21026

Analysis Batch: 21142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2041-7	B-120 4.1	Soluble	Solid	300.0	21027
MB 880-21027/1-A	Method Blank	Soluble	Solid	300.0	21027
LCS 880-21027/2-A	Lab Control Sample	Soluble	Solid	300.0	21027
LCSD 880-21027/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21027
880-12040-A-9-F MS	Matrix Spike	Soluble	Solid	300.0	21027
880-12040-A-9-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21027

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Client Sample ID: SW-19 0-4.1'

Lab Sample ID: 890-2041-1
Matrix: Solid
Date Collected: 03/03/22 08:15
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	20897	03/04/22 12:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/06/22 18:38	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21018	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21100	03/08/22 06:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	21055	03/07/22 17:48	AM	XEN MID
Total/NA	Analysis	8015B NM		1			21016	03/07/22 22:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	21026	03/07/22 10:38	CH	XEN MID
Soluble	Analysis	300.0		1			21137	03/09/22 18:32	CH	XEN MID

Client Sample ID: SW-22 0-4.1'

Lab Sample ID: 890-2041-2
Matrix: Solid
Date Collected: 03/03/22 11:23
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	20897	03/04/22 12:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/06/22 18:58	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21018	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21100	03/08/22 06:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21055	03/07/22 17:48	AM	XEN MID
Total/NA	Analysis	8015B NM		1			21016	03/07/22 23:16	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21026	03/07/22 10:38	CH	XEN MID
Soluble	Analysis	300.0		1			21137	03/09/22 18:38	CH	XEN MID

Client Sample ID: B-116 4.1'

Lab Sample ID: 890-2041-3
Matrix: Solid
Date Collected: 03/03/22 12:30
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	20897	03/04/22 12:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/06/22 19:19	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21018	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21100	03/08/22 06:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21055	03/07/22 17:48	AM	XEN MID
Total/NA	Analysis	8015B NM		1			21016	03/07/22 23:36	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21026	03/07/22 10:38	CH	XEN MID
Soluble	Analysis	300.0		50			21137	03/09/22 18:44	CH	XEN MID

Client Sample ID: B-117 4.1'

Lab Sample ID: 890-2041-4
Matrix: Solid
Date Collected: 03/03/22 12:33
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	20897	03/04/22 12:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/06/22 19:39	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21018	03/07/22 10:04	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Client Sample ID: B-117 4.1'

Lab Sample ID: 890-2041-4
Matrix: Solid
Date Collected: 03/03/22 12:33
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			21100	03/08/22 06:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	21055	03/07/22 17:48	AM	XEN MID
Total/NA	Analysis	8015B NM		1			21016	03/07/22 23:57	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	21026	03/07/22 10:38	CH	XEN MID
Soluble	Analysis	300.0		10			21137	03/09/22 18:50	CH	XEN MID

Client Sample ID: B-118 4.1

Lab Sample ID: 890-2041-5
Matrix: Solid
Date Collected: 03/03/22 12:34
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20897	03/04/22 12:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/06/22 20:00	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21018	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21100	03/08/22 06:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21055	03/07/22 17:48	AM	XEN MID
Total/NA	Analysis	8015B NM		1			21016	03/08/22 00:17	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	21026	03/07/22 10:38	CH	XEN MID
Soluble	Analysis	300.0		10			21137	03/09/22 18:56	CH	XEN MID

Client Sample ID: B-119 4.1

Lab Sample ID: 890-2041-6
Matrix: Solid
Date Collected: 03/03/22 12:35
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	20897	03/04/22 12:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/06/22 20:20	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21018	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21100	03/08/22 06:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21055	03/07/22 17:48	AM	XEN MID
Total/NA	Analysis	8015B NM		1			21016	03/08/22 00:37	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	21026	03/07/22 10:38	CH	XEN MID
Soluble	Analysis	300.0		5			21137	03/09/22 19:01	CH	XEN MID

Client Sample ID: B-120 4.1

Lab Sample ID: 890-2041-7
Matrix: Solid
Date Collected: 03/03/22 12:36
Date Received: 03/03/22 15:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	20897	03/04/22 12:13	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/06/22 20:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21018	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21100	03/08/22 06:22	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	21055	03/07/22 17:48	AM	XEN MID
Total/NA	Analysis	8015B NM		1			21016	03/08/22 00:58	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Client Sample ID: B-120 4.1
Date Collected: 03/03/22 12:36
Date Received: 03/03/22 15:38

Lab Sample ID: 890-2041-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	21027	03/07/22 10:42	CH	XEN MID
Soluble	Analysis	300.0		5			21142	03/10/22 08:46	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc. Job ID: 890-2041-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2041-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-2041-1	SW-19 0-4.1'	Solid	03/03/22 08:15	03/03/22 15:38	0 - 4.1
890-2041-2	SW-22 0-4.1'	Solid	03/03/22 11:23	03/03/22 15:38	0 - 4.1
890-2041-3	B-116 4.1'	Solid	03/03/22 12:30	03/03/22 15:38	4.1
890-2041-4	B-117 4.1'	Solid	03/03/22 12:33	03/03/22 15:38	4.1
890-2041-5	B-118 4.1	Solid	03/03/22 12:34	03/03/22 15:38	4.1
890-2041-6	B-119 4.1	Solid	03/03/22 12:35	03/03/22 15:38	4.1
890-2041-7	B-120 4.1	Solid	03/03/22 12:36	03/03/22 15:38	4.1

Released to Imaging: 6/17/2022 2:48:59 PM
Received by OCD: 6/16/2022 1:42:34 PM

No. 2278

Cooling in Progress

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 3/3/2022 PAGE 1 OF 1

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State: MST/NM

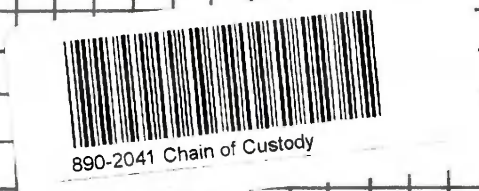
S=SOIL W=WATER A=AIR P=PAINT SL=SLUDGE OT=OTHER

PRESERVATION: HCl, HNO_3, H_2SO_4, NaOH, ICE, UNPRESSERVED

ANALYSES: BTEX, MTBE, TRPH 418.1, TPH 1005, TPH 1006, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015, VOC 8260, SVOC 8270, PAH 8270, HOLDPAH, 8081 PESTICIDES, 8151 HERBICIDES, 8082 PCBS, TCLP - METALS (RCRA), TCLP - PEST, TOTAL METALS (RCRA), LEAD - TOTAL, RCI, TDS, pH, TCLP VOC, HERB, Semi-VOC, OTHER LIST, DW 200.8, TOX, TSS, FLASHPOINT, % MOISTURE, HEXAVALENT CHROMIUM, EXPLOSIVES, CHLORIDE, TCLP, CYANIDE, PECHLORATE, ANIONS, ALKALINITY

Field Sample I.D	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4	NaOH	ICE	UNPRESSERVED	ANALYSES	FIELD NOTES
SW-19 0-4.1'		3/3/22	0815	S	1					X		BTEX, TRPH 418.1, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015	
SW-22 0-4.1'		3/3/22	1123	S	1					X		BTEX, TRPH 418.1, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015	
B-116 @ 4.1'		3/3/22	1230	S	1					X		BTEX, TRPH 418.1, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015	
B-117 4.1'		3/3/22	1233	S	1					X		BTEX, TRPH 418.1, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015	
B-118 4.1		3/3/22	1234	S	1					X		BTEX, TRPH 418.1, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015	
B-119 4.1		3/3/22	1235	S	1					X		BTEX, TRPH 418.1, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015	
B-120 4.1		3/3/22	1236	S	1					X		BTEX, TRPH 418.1, GASOLINE MOD 8015, DIESEL - MOD 8015, OIL - MOD 8015	

TOTAL 7



RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	3/3/2022 3:38	[signature]
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY: XENCO

TURN AROUND TIME
NORMAL ☑
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 9.6/9.4 THERM# T-NM-007
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☑ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler	Lab PM: Taylor, Holly	Carrier Tracking No(s):	COC No: 890-652 1
Client Contact: Shipping/Receiving	Phone	E-Mail: holly taylor@eurofinset.com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Louisiana NELAP - Texas		Job #: 890-2041-1
Address: 1211 W Florida Ave	Due Date Requested: 3/9/2022			
City: Midland	TAT Requested (days):			
State Zip: TX, 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: mack pw release	Project #: 89000025			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Z	other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX - LL	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
sw-19 (890-2041-1)	3/3/22	08 15 Mountain		Solid			X	X	X	X	X	1	
sw-22 (890-2041-2)	3/3/22	11 23 Mountain		Solid			X	X	X	X	X	1	
B-116 (890-2041-3)	3/3/22	12 30 Mountain		Solid			X	X	X	X	X	1	
B-117 (890-2041-4)	3/3/22	12 33 Mountain		Solid			X	X	X	X	X	1	
B-118 (890-2041-5)	3/3/22	12 34 Mountain		Solid			X	X	X	X	X	1	
B-119 (890-2041-6)	3/3/22	12 35 Mountain		Solid			X	X	X	X	X	1	
B-120 (890-2041-7)	3/3/22	12 36 Mountain		Solid			X	X	X	X	X	1	

Note Since laboratory accreditations are subject to change, Eurofins Environment Testing South Central, LLC places the ownership of method analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central, LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

	Relinquished by	Date/Time:	Company	Received by	Date/Time	Company
1	Cloe Cruz 3422				3422 13:15	Xenco
2	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
3	Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

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Received by OCD: 6/16/2022 1:42:34 PM
3/10/2022
Page 27 of 29
Released to Imaging: 6/17/2022 2:48:59 PM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 890-2041-1
SDG Number: 21-0105-04

Login Number: 2041
List Number: 1
Creator: Olivas, Nathaniel

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 890-2041-1
SDG Number: 21-0105-04

Login Number: 2041
List Number: 2
Creator: Lowe, Katie

List Source: Eurofins Midland
List Creation: 03/04/22 01:21 PM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 890-2034-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW Release
Revision: 1

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
3/16/2022 11:35:34 AM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Laboratory Job ID: 890-2034-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
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.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Job ID: 890-2034-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-2034-1

Comments
No additional comments.

Revision
The report being provided is a revision of the original report sent on 3/9/2022. The report (revision 1) is being revised to report the results of the re-analysis of TPH on sample 1 per Robert Nelson..

Receipt
The samples were received on 3/1/2022 3:31 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 21.0º C.

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

GC Semi VOA
Method 8015B NM: Surrogate recovery for the following samples were outside control limits: SW-6 (890-2034-2), SW-43 (890-2034-3), SW-39 (890-2034-4), SW-38 (890-2034-5), B-100 (890-2034-6), (890-2036-A-1-J MS) and (890-2036-A-1-K MSD). Evidence of matrix interferences is not obvious.

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

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

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

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: SW-5

Date Collected: 03/01/22 08:15
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 01:40	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 01:40	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 01:40	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/06/22 11:20	03/07/22 01:40	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 01:40	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/06/22 11:20	03/07/22 01:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*03/06/22 11:20*	*03/07/22 01:40*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/06/22 11:20*	*03/07/22 01:40*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/11/22 08:33	03/14/22 03:53	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/11/22 08:33	03/14/22 03:53	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/11/22 08:33	03/14/22 03:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*101*		*70 - 130*	*03/11/22 08:33*	*03/14/22 03:53*	*1*
o-Terphenyl (Surr)	*111*		*70 - 130*	*03/11/22 08:33*	*03/14/22 03:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.2**		5.00		mg/Kg			03/08/22 18:26	1

Client Sample ID: SW-6

Date Collected: 03/01/22 08:20
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 02:01	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 02:01	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 02:01	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		03/06/22 11:20	03/07/22 02:01	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 02:01	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		03/06/22 11:20	03/07/22 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/06/22 11:20*	*03/07/22 02:01*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*03/06/22 11:20*	*03/07/22 02:01*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: SW-6

Date Collected: 03/01/22 08:20
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-2
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**71.3**		50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 19:25	1
Diesel Range Organics (Over C10-C28)	**71.3**		50.0		mg/Kg		03/03/22 14:43	03/08/22 19:25	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*165*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 19:25*	*1*
o-Terphenyl (Surr)	*151*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 19:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**129**		5.00		mg/Kg			03/05/22 15:39	1

Client Sample ID: SW-43

Date Collected: 03/01/22 09:25
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 02:21	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 02:21	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 02:21	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 02:21	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 02:21	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*03/06/22 11:20*	*03/07/22 02:21*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/06/22 11:20*	*03/07/22 02:21*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 19:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 19:46	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: SW-43
Date Collected: 03/01/22 09:25
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*142*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 19:46*	*1*
o-Terphenyl (Surr)	*136*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 19:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**311**		4.98		mg/Kg			03/05/22 15:48	1

Client Sample ID: SW-39
Date Collected: 03/01/22 13:31
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 02:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 02:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 02:42	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/06/22 11:20	03/07/22 02:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 02:42	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/06/22 11:20	03/07/22 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*03/06/22 11:20*	*03/07/22 02:42*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/06/22 11:20*	*03/07/22 02:42*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**53.2**		49.9		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 20:07	1
Diesel Range Organics (Over C10-C28)	**53.2**		49.9		mg/Kg		03/03/22 14:43	03/08/22 20:07	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 20:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*138*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 20:07*	*1*
o-Terphenyl (Surr)	*134*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 20:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**115**		4.95		mg/Kg			03/05/22 16:15	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: SW-38

Date Collected: 03/01/22 13:39
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-5
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 03:02	1
Toluene	**0.00241**		0.00202		mg/Kg		03/06/22 11:20	03/07/22 03:02	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 03:02	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		03/06/22 11:20	03/07/22 03:02	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/06/22 11:20	03/07/22 03:02	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		03/06/22 11:20	03/07/22 03:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*03/06/22 11:20*	*03/07/22 03:02*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*03/06/22 11:20*	*03/07/22 03:02*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 20:28	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 20:28	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*245*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 20:28*	*1*
o-Terphenyl (Surr)	*222*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 20:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.6**		4.96		mg/Kg			03/05/22 16:23	1

Client Sample ID: B-100

Date Collected: 03/01/22 12:30
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-6
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00464**		0.00201		mg/Kg		03/06/22 11:20	03/07/22 03:22	1
Toluene	**0.00635**		0.00201		mg/Kg		03/06/22 11:20	03/07/22 03:22	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/06/22 11:20	03/07/22 03:22	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/06/22 11:20	03/07/22 03:22	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/06/22 11:20	03/07/22 03:22	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/06/22 11:20	03/07/22 03:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*03/06/22 11:20*	*03/07/22 03:22*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*03/06/22 11:20*	*03/07/22 03:22*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-100

Date Collected: 03/01/22 12:30
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-6
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0110**		0.00402		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 20:49	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 20:49	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 20:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*138*	*S1+*	*70 - 130*	*03/03/22 14:43*	*03/08/22 20:49*	*1*
o-Terphenyl (Surr)	*124*		*70 - 130*	*03/03/22 14:43*	*03/08/22 20:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2290**		25.1		mg/Kg			03/05/22 16:32	5

Client Sample ID: B-101

Date Collected: 03/01/22 12:32
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-7
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 05:12	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 05:12	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 05:12	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		03/06/22 11:20	03/07/22 05:12	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 05:12	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		03/06/22 11:20	03/07/22 05:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/06/22 11:20*	*03/07/22 05:12*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/06/22 11:20*	*03/07/22 05:12*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 21:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 21:11	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-101
Date Collected: 03/01/22 12:32
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*123*		*70 - 130*	*03/03/22 14:43*	*03/08/22 21:11*	*1*
o-Terphenyl (Surr)	*121*		*70 - 130*	*03/03/22 14:43*	*03/08/22 21:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4120**		49.8		mg/Kg			03/05/22 16:41	10

Client Sample ID: B-102
Date Collected: 03/01/22 12:38
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-8
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 05:33	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 05:33	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 05:33	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/06/22 11:20	03/07/22 05:33	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 05:33	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/06/22 11:20	03/07/22 05:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/06/22 11:20*	*03/07/22 05:33*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*03/06/22 11:20*	*03/07/22 05:33*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 21:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 21:33	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/03/22 14:43	03/08/22 21:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*117*		*70 - 130*	*03/03/22 14:43*	*03/08/22 21:33*	*1*
o-Terphenyl (Surr)	*116*		*70 - 130*	*03/03/22 14:43*	*03/08/22 21:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6120**		49.9		mg/Kg			03/05/22 16:50	10

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-103

Date Collected: 03/01/22 12:40
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-9

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 05:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 05:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 05:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 05:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 05:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 05:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*03/06/22 11:20*	*03/07/22 05:53*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*03/06/22 11:20*	*03/07/22 05:53*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:06	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:06	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*124*		*70 - 130*	*03/03/22 13:42*	*03/04/22 03:06*	*1*
o-Terphenyl (Surr)	*116*		*70 - 130*	*03/03/22 13:42*	*03/04/22 03:06*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**766**		25.0		mg/Kg			03/05/22 16:59	5

Client Sample ID: B-104

Date Collected: 03/01/22 12:42
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-10

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:13	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:13	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:13	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 06:13	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:13	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 06:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*03/06/22 11:20*	*03/07/22 06:13*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/06/22 11:20*	*03/07/22 06:13*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-104

Date Collected: 03/01/22 12:42
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-10
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*135*	*S1+*	*70 - 130*	*03/03/22 13:42*	*03/04/22 03:27*	*1*
o-Terphenyl (Surr)	*132*	*S1+*	*70 - 130*	*03/03/22 13:42*	*03/04/22 03:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1880**		24.9		mg/Kg			03/05/22 17:25	5

Client Sample ID: B-105

Date Collected: 03/01/22 12:47
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-11
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 06:34	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 06:34	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 06:34	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		03/06/22 11:20	03/07/22 06:34	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/06/22 11:20	03/07/22 06:34	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		03/06/22 11:20	03/07/22 06:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*03/06/22 11:20*	*03/07/22 06:34*	*1*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*	*03/06/22 11:20*	*03/07/22 06:34*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:48	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:48	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-105

Date Collected: 03/01/22 12:47
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-11

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*129*		*70 - 130*	*03/03/22 13:42*	*03/04/22 03:48*	*1*
o-Terphenyl (Surr)	*126*		*70 - 130*	*03/03/22 13:42*	*03/04/22 03:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1940**		24.8		mg/Kg			03/05/22 17:34	5

Client Sample ID: B-106

Date Collected: 03/01/22 12:49
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-12

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:54	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:54	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:54	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 06:54	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 06:54	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 06:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*03/06/22 11:20*	*03/07/22 06:54*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/06/22 11:20*	*03/07/22 06:54*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 04:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 04:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 04:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*108*		*70 - 130*	*03/03/22 13:42*	*03/04/22 04:10*	*1*
o-Terphenyl (Surr)	*105*		*70 - 130*	*03/03/22 13:42*	*03/04/22 04:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9680**		100		mg/Kg			03/05/22 18:01	20

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-107

Date Collected: 03/01/22 12:53
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-13

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:15	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:15	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:15	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/06/22 11:20	03/07/22 07:15	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:15	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/06/22 11:20	03/07/22 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*03/06/22 11:20*	*03/07/22 07:15*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*03/06/22 11:20*	*03/07/22 07:15*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/03/22 13:42	03/04/22 04:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/03/22 13:42	03/04/22 04:31	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/03/22 13:42	03/04/22 04:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*128*		*70 - 130*	*03/03/22 13:42*	*03/04/22 04:31*	*1*
o-Terphenyl (Surr)	*125*		*70 - 130*	*03/03/22 13:42*	*03/04/22 04:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1430**		24.9		mg/Kg			03/05/22 18:10	5

Client Sample ID: B-108

Date Collected: 03/01/22 12:55
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-14

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 07:35	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 07:35	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 07:35	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 07:35	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 07:35	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 07:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/06/22 11:20*	*03/07/22 07:35*	*1*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*	*03/06/22 11:20*	*03/07/22 07:35*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-108

Date Collected: 03/01/22 12:55
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-14
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/03/22 13:42	03/04/22 04:52	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/03/22 13:42	03/04/22 04:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/03/22 13:42	03/04/22 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*03/03/22 13:42*	*03/04/22 04:52*	*1*
o-Terphenyl (Surr)	*97*		*70 - 130*	*03/03/22 13:42*	*03/04/22 04:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1560**		24.9		mg/Kg			03/05/22 18:19	5

Client Sample ID: B-109

Date Collected: 03/01/22 12:57
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-15
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:56	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/06/22 11:20	03/07/22 07:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/07/22 07:56	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/06/22 11:20	03/07/22 07:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*03/06/22 11:20*	*03/07/22 07:56*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*03/06/22 11:20*	*03/07/22 07:56*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 05:13	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 05:13	1

Eurofins Carlsbad

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-109

Date Collected: 03/01/22 12:57
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-15

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/04/22 05:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*108*		*70 - 130*	*03/03/22 13:42*	*03/04/22 05:13*	*1*
o-Terphenyl (Surr)	*103*		*70 - 130*	*03/03/22 13:42*	*03/04/22 05:13*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1500**		25.0		mg/Kg			03/05/22 18:28	5

Client Sample ID: B-110

Date Collected: 03/01/22 13:00
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-16

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 08:16	1
Toluene	**0.00277**		0.00199		mg/Kg		03/06/22 11:20	03/07/22 08:16	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 08:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 08:16	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/06/22 11:20	03/07/22 08:16	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/06/22 11:20	03/07/22 08:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*03/06/22 11:20*	*03/07/22 08:16*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*03/06/22 11:20*	*03/07/22 08:16*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/07/22 10:04	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/04/22 13:00	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/03/22 11:15	03/07/22 05:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/03/22 11:15	03/07/22 05:14	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/03/22 11:15	03/07/22 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*110*		*70 - 130*	*03/03/22 11:15*	*03/07/22 05:14*	*1*
o-Terphenyl (Surr)	*113*		*70 - 130*	*03/03/22 11:15*	*03/07/22 05:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1430**		25.0		mg/Kg			03/05/22 18:36	5

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-11797-A-1-L MSD	Matrix Spike Duplicate	105	103
880-11797-A-1-N MS	Matrix Spike	102	87
890-2034-1	SW-5	108	97
890-2034-2	SW-6	102	99
890-2034-3	SW-43	105	97
890-2034-4	SW-39	104	100
890-2034-5	SW-38	101	96
890-2034-6	B-100	95	91
890-2034-7	B-101	102	100
890-2034-8	B-102	102	99
890-2034-9	B-103	106	90
890-2034-10	B-104	106	93
890-2034-11	B-105	99	97
890-2034-12	B-106	104	100
890-2034-13	B-107	95	94
890-2034-14	B-108	100	92
890-2034-15	B-109	93	96
890-2034-16	B-110	98	94
LCS 880-20688/1-A	Lab Control Sample	97	103
LCSD 880-20688/2-A	Lab Control Sample Dup	99	101
MB 880-20688/5-A	Method Blank	100	98
MB 880-20897/5-A	Method Blank	95	98

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-11958-A-10-C MS	Matrix Spike	105	80
880-11958-A-10-D MSD	Matrix Spike Duplicate	105	81
880-12004-A-1-C MS	Matrix Spike	102	104
880-12004-A-1-D MSD	Matrix Spike Duplicate	102	104
890-2034-1	SW-5	101	111
890-2034-2	SW-6	165 S1+	151 S1+
890-2034-3	SW-43	142 S1+	136 S1+
890-2034-4	SW-39	138 S1+	134 S1+
890-2034-5	SW-38	245 S1+	222 S1+
890-2034-6	B-100	138 S1+	124
890-2034-7	B-101	123	121
890-2034-8	B-102	117	116
890-2034-9	B-103	124	116
890-2034-10	B-104	135 S1+	132 S1+
890-2034-11	B-105	129	126
890-2034-12	B-106	108	105
890-2034-13	B-107	128	125

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 890-2034-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
890-2034-14	B-108	102	97
890-2034-15	B-109	108	103
890-2034-16	B-110	110	113
890-2036-A-1-J MS	Matrix Spike	155 S1+	122
890-2036-A-1-K MSD	Matrix Spike Duplicate	149 S1+	118
890-2054-A-1-D MS	Matrix Spike	89	91
890-2054-A-1-E MSD	Matrix Spike Duplicate	71	69 S1-
LCS 880-20799/2-A	Lab Control Sample	102	93
LCS 880-20819/2-A	Lab Control Sample	120	118
LCS 880-20828/2-A	Lab Control Sample	128	109
LCSD 880-20799/3-A	Lab Control Sample Dup	102	95
LCSD 880-20819/3-A	Lab Control Sample Dup	110	104
LCSD 880-20828/3-A	Lab Control Sample Dup	110	99
MB 880-20799/1-A	Method Blank	116	134 S1+
MB 880-20819/1-A	Method Blank	107	110
MB 880-20828/1-A	Method Blank	108	101

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO2 (70-130)	OTPH2 (70-130)
LCS 880-21363/2-A	Lab Control Sample	89	94
LCSD 880-21363/3-A	Lab Control Sample Dup	107	120
MB 880-21363/1-A	Method Blank	99	114

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-20688/5-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20688

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/06/22 23:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/06/22 23:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/06/22 23:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/06/22 11:20	03/06/22 23:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/06/22 11:20	03/06/22 23:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/06/22 11:20	03/06/22 23:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/06/22 11:20*	*03/06/22 23:50*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/06/22 11:20*	*03/06/22 23:50*	*1*

Lab Sample ID: LCS 880-20688/1-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20688

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1076		mg/Kg		108	70 - 130		
Toluene			0.100	0.1007		mg/Kg		101	70 - 130		
Ethylbenzene			0.100	0.09908		mg/Kg		99	70 - 130		
m-Xylene & p-Xylene			0.200	0.2300		mg/Kg		115	70 - 130		
o-Xylene			0.100	0.1125		mg/Kg		112	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-20688/2-A
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20688

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1036		mg/Kg		104	70 - 130	4	35
Toluene			0.100	0.09620		mg/Kg		96	70 - 130	5	35
Ethylbenzene			0.100	0.09579		mg/Kg		96	70 - 130	3	35
m-Xylene & p-Xylene			0.200	0.2221		mg/Kg		111	70 - 130	3	35
o-Xylene			0.100	0.1103		mg/Kg		110	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-11797-A-1-L MSD
Matrix: Solid
Analysis Batch: 20859

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20688

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00198	U F2 F1	0.0992	0.08934	F2	mg/Kg		89	70 - 130	83	35
Toluene	<0.00198	U F2 F1	0.0992	0.08271	F2	mg/Kg		82	70 - 130	69	35

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Lab Sample ID: 880-11797-A-1-L MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20859 — **Prep Batch: 20688**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	<0.00198	U F2 F1	0.0992	0.08084	F2	mg/Kg		81	70 - 130	62	35
m-Xylene & p-Xylene	<0.00397	U F2 F1	0.198	0.1874	F2	mg/Kg		94	70 - 130	66	35
o-Xylene	<0.00198	U F2 F1	0.0992	0.09159	F2	mg/Kg		92	70 - 130	64	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 880-11797-A-1-N MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20859 — **Prep Batch: 20688**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00198	U F2 F1	0.0990	0.03681	F1	mg/Kg		36	70 - 130
Toluene	<0.00198	U F2 F1	0.0990	0.04011	F1	mg/Kg		39	70 - 130
Ethylbenzene	<0.00198	U F2 F1	0.0990	0.04279	F1	mg/Kg		43	70 - 130
m-Xylene & p-Xylene	<0.00397	U F2 F1	0.198	0.09448	F1	mg/Kg		48	70 - 130
o-Xylene	<0.00198	U F2 F1	0.0990	0.04736	F1	mg/Kg		48	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: MB 880-20897/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20859 — **Prep Batch: 20897**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/04/22 12:13	03/06/22 12:14	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/04/22 12:13	03/06/22 12:14	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/04/22 12:13	03/06/22 12:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		03/04/22 12:13	03/06/22 12:14	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/04/22 12:13	03/06/22 12:14	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/04/22 12:13	03/06/22 12:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*03/04/22 12:13*	*03/06/22 12:14*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*03/04/22 12:13*	*03/06/22 12:14*	*1*

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

Lab Sample ID: MB 880-20799/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 20971 — **Prep Batch: 20799**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		03/03/22 11:15	03/06/22 20:41	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-20799/1-A
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20799

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 11:15	03/06/22 20:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 11:15	03/06/22 20:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*116*		*70 - 130*	*03/03/22 11:15*	*03/06/22 20:41*	*1*
o-Terphenyl (Surr)	*134*	*S1+*	*70 - 130*	*03/03/22 11:15*	*03/06/22 20:41*	*1*

Lab Sample ID: LCS 880-20799/2-A
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20799

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	794.8		mg/Kg		79	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	795.3		mg/Kg		80	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*102*		*70 - 130*
o-Terphenyl (Surr)	*93*		*70 - 130*

Lab Sample ID: LCSD 880-20799/3-A
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20799

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	789.1		mg/Kg		79	70 - 130	1	20
Diesel Range Organics (Over C10-C28)			1000	804.6		mg/Kg		80	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*102*		*70 - 130*
o-Terphenyl (Surr)	*95*		*70 - 130*

Lab Sample ID: 880-11958-A-10-C MS
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20799

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	970.5		mg/Kg		95	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1020		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*105*		*70 - 130*
o-Terphenyl (Surr)	*80*		*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Lab Sample ID: 880-11958-A-10-D MSD
Matrix: Solid
Analysis Batch: 20971

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20799

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	953.8		mg/Kg		94	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1065		mg/Kg		107	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*105*		*70 - 130*
o-Terphenyl (Surr)	*81*		*70 - 130*

Lab Sample ID: MB 880-20819/1-A
Matrix: Solid
Analysis Batch: 20779

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20819

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/03/22 21:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/03/22 21:29	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 13:42	03/03/22 21:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*107*		*70 - 130*	*03/03/22 13:42*	*03/03/22 21:29*	*1*
o-Terphenyl (Surr)	*110*		*70 - 130*	*03/03/22 13:42*	*03/03/22 21:29*	*1*

Lab Sample ID: LCS 880-20819/2-A
Matrix: Solid
Analysis Batch: 20779

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20819

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1119		mg/Kg		112	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	952.3		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*120*		*70 - 130*
o-Terphenyl (Surr)	*118*		*70 - 130*

Lab Sample ID: LCSD 880-20819/3-A
Matrix: Solid
Analysis Batch: 20779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20819

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1097		mg/Kg		110	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	973.4		mg/Kg		97	70 - 130	2	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-20819/3-A
Matrix: Solid
Analysis Batch: 20779

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20819

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	110		70 - 130
o-Terphenyl (Surr)	104		70 - 130

Lab Sample ID: 880-12004-A-1-C MS
Matrix: Solid
Analysis Batch: 20779

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20819

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1130		mg/Kg		110	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	948.3		mg/Kg		93	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane (Surr)	102		70 - 130
o-Terphenyl (Surr)	104		70 - 130

Lab Sample ID: 880-12004-A-1-D MSD
Matrix: Solid
Analysis Batch: 20779

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20819

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1175		mg/Kg		115	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	954.1		mg/Kg		93	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane (Surr)	102		70 - 130
o-Terphenyl (Surr)	104		70 - 130

Lab Sample ID: MB 880-20828/1-A
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20828

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 12:58	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 12:58	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/03/22 14:43	03/08/22 12:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	108		70 - 130	03/03/22 14:43	03/08/22 12:58	1
o-Terphenyl (Surr)	101		70 - 130	03/03/22 14:43	03/08/22 12:58	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Lab Sample ID: LCS 880-20828/2-A
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20828

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1007		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1173		mg/Kg		117	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*128*		*70 - 130*
o-Terphenyl (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-20828/3-A
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20828

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	872.5		mg/Kg		87	70 - 130	14	20
Diesel Range Organics (Over C10-C28)			1000	986.8		mg/Kg		99	70 - 130	17	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*110*		*70 - 130*
o-Terphenyl (Surr)	*99*		*70 - 130*

Lab Sample ID: 890-2036-A-1-J MS
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20828

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1292		mg/Kg		129	70 - 130		
Diesel Range Organics (Over C10-C28)	126		1000	1268		mg/Kg		114	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*155*	*S1+*	*70 - 130*
o-Terphenyl (Surr)	*122*		*70 - 130*

Lab Sample ID: 890-2036-A-1-K MSD
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20828

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1277		mg/Kg		128	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	126		998	1182		mg/Kg		106	70 - 130	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*149*	*S1+*	*70 - 130*

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Lab Sample ID: 890-2036-A-1-K MSD
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 20828

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	118		70 - 130

Lab Sample ID: MB 880-21363/1-A
Matrix: Solid
Analysis Batch: 21518

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21363

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/11/22 08:33	03/13/22 21:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/11/22 08:33	03/13/22 21:11	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/11/22 08:33	03/13/22 21:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	99		70 - 130	03/11/22 08:33	03/13/22 21:11	1
o-Terphenyl (Surr)	114		70 - 130	03/11/22 08:33	03/13/22 21:11	1

Lab Sample ID: LCS 880-21363/2-A
Matrix: Solid
Analysis Batch: 21518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21363

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	925.1		mg/Kg		93	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	832.3		mg/Kg		83	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	89		70 - 130
o-Terphenyl (Surr)	94		70 - 130

Lab Sample ID: LCSD 880-21363/3-A
Matrix: Solid
Analysis Batch: 21518

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21363

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	982.0		mg/Kg		98	70 - 130	6	20
Diesel Range Organics (Over C10-C28)			1000	938.2		mg/Kg		94	70 - 130	12	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	107		70 - 130
o-Terphenyl (Surr)	120		70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Lab Sample ID: 890-2054-A-1-D MS
Matrix: Solid
Analysis Batch: 21518

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21363

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 F2	998	866.4		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	51.5	F1 F2	998	834.4		mg/Kg		78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*89*		*70 - 130*
o-Terphenyl (Surr)	*91*		*70 - 130*

Lab Sample ID: 890-2054-A-1-E MSD
Matrix: Solid
Analysis Batch: 21518

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 21363

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U F1 F2	998	674.5	F1 F2	mg/Kg		64	70 - 130	25	20
Diesel Range Organics (Over C10-C28)	51.5	F1 F2	998	643.9	F1 F2	mg/Kg		59	70 - 130	26	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*71*		*70 - 130*
o-Terphenyl (Surr)	*69*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-20808/1-A
Matrix: Solid
Analysis Batch: 20964

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/05/22 14:28	1

Lab Sample ID: LCS 880-20808/2-A
Matrix: Solid
Analysis Batch: 20964

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	251.3		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-20808/3-A
Matrix: Solid
Analysis Batch: 20964

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	251.9		mg/Kg		101	90 - 110	0	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 890-2034-9 MS
Matrix: Solid
Analysis Batch: 20964

Client Sample ID: B-103
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	766		1250	2022		mg/Kg		100	90 - 110

Lab Sample ID: 890-2034-9 MSD
Matrix: Solid
Analysis Batch: 20964

Client Sample ID: B-103
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	766		1250	2023		mg/Kg		101	90 - 110	0	20

Lab Sample ID: MB 880-21022/1-A
Matrix: Solid
Analysis Batch: 21050

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/08/22 14:27	1

Lab Sample ID: LCS 880-21022/2-A
Matrix: Solid
Analysis Batch: 21050

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	253.3		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-21022/3-A
Matrix: Solid
Analysis Batch: 21050

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	253.0		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 890-2047-A-1-F MS
Matrix: Solid
Analysis Batch: 21050

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1070		248	1318	4	mg/Kg		98	90 - 110

Lab Sample ID: 890-2047-A-1-G MSD
Matrix: Solid
Analysis Batch: 21050

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1070		248	1308	4	mg/Kg		94	90 - 110	1	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

GC VOA

Prep Batch: 20688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Total/NA	Solid	5035	
890-2034-2	SW-6	Total/NA	Solid	5035	
890-2034-3	SW-43	Total/NA	Solid	5035	
890-2034-4	SW-39	Total/NA	Solid	5035	
890-2034-5	SW-38	Total/NA	Solid	5035	
890-2034-6	B-100	Total/NA	Solid	5035	
890-2034-7	B-101	Total/NA	Solid	5035	
890-2034-8	B-102	Total/NA	Solid	5035	
890-2034-9	B-103	Total/NA	Solid	5035	
890-2034-10	B-104	Total/NA	Solid	5035	
890-2034-11	B-105	Total/NA	Solid	5035	
890-2034-12	B-106	Total/NA	Solid	5035	
890-2034-13	B-107	Total/NA	Solid	5035	
890-2034-14	B-108	Total/NA	Solid	5035	
890-2034-15	B-109	Total/NA	Solid	5035	
890-2034-16	B-110	Total/NA	Solid	5035	
MB 880-20688/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-20688/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-20688/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11797-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
880-11797-A-1-N MS	Matrix Spike	Total/NA	Solid	5035	

Analysis Batch: 20859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Total/NA	Solid	8021B	20688
890-2034-2	SW-6	Total/NA	Solid	8021B	20688
890-2034-3	SW-43	Total/NA	Solid	8021B	20688
890-2034-4	SW-39	Total/NA	Solid	8021B	20688
890-2034-5	SW-38	Total/NA	Solid	8021B	20688
890-2034-6	B-100	Total/NA	Solid	8021B	20688
890-2034-7	B-101	Total/NA	Solid	8021B	20688
890-2034-8	B-102	Total/NA	Solid	8021B	20688
890-2034-9	B-103	Total/NA	Solid	8021B	20688
890-2034-10	B-104	Total/NA	Solid	8021B	20688
890-2034-11	B-105	Total/NA	Solid	8021B	20688
890-2034-12	B-106	Total/NA	Solid	8021B	20688
890-2034-13	B-107	Total/NA	Solid	8021B	20688
890-2034-14	B-108	Total/NA	Solid	8021B	20688
890-2034-15	B-109	Total/NA	Solid	8021B	20688
890-2034-16	B-110	Total/NA	Solid	8021B	20688
MB 880-20688/5-A	Method Blank	Total/NA	Solid	8021B	20688
MB 880-20897/5-A	Method Blank	Total/NA	Solid	8021B	20897
LCS 880-20688/1-A	Lab Control Sample	Total/NA	Solid	8021B	20688
LCSD 880-20688/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	20688
880-11797-A-1-L MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	20688
880-11797-A-1-N MS	Matrix Spike	Total/NA	Solid	8021B	20688

Prep Batch: 20897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-20897/5-A	Method Blank	Total/NA	Solid	5035	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

GC VOA

Analysis Batch: 21021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Total/NA	Solid	Total BTEX	
890-2034-2	SW-6	Total/NA	Solid	Total BTEX	
890-2034-3	SW-43	Total/NA	Solid	Total BTEX	
890-2034-4	SW-39	Total/NA	Solid	Total BTEX	
890-2034-5	SW-38	Total/NA	Solid	Total BTEX	
890-2034-6	B-100	Total/NA	Solid	Total BTEX	
890-2034-7	B-101	Total/NA	Solid	Total BTEX	
890-2034-8	B-102	Total/NA	Solid	Total BTEX	
890-2034-9	B-103	Total/NA	Solid	Total BTEX	
890-2034-10	B-104	Total/NA	Solid	Total BTEX	
890-2034-11	B-105	Total/NA	Solid	Total BTEX	
890-2034-12	B-106	Total/NA	Solid	Total BTEX	
890-2034-13	B-107	Total/NA	Solid	Total BTEX	
890-2034-14	B-108	Total/NA	Solid	Total BTEX	
890-2034-15	B-109	Total/NA	Solid	Total BTEX	
890-2034-16	B-110	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 20779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-9	B-103	Total/NA	Solid	8015B NM	20819
890-2034-10	B-104	Total/NA	Solid	8015B NM	20819
890-2034-11	B-105	Total/NA	Solid	8015B NM	20819
890-2034-12	B-106	Total/NA	Solid	8015B NM	20819
890-2034-13	B-107	Total/NA	Solid	8015B NM	20819
890-2034-14	B-108	Total/NA	Solid	8015B NM	20819
890-2034-15	B-109	Total/NA	Solid	8015B NM	20819
MB 880-20819/1-A	Method Blank	Total/NA	Solid	8015B NM	20819
LCS 880-20819/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	20819
LCSD 880-20819/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	20819
880-12004-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	20819
880-12004-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	20819

Prep Batch: 20799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-16	B-110	Total/NA	Solid	8015NM Prep	
MB 880-20799/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-20799/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-20799/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-11958-A-10-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-11958-A-10-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 20819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-9	B-103	Total/NA	Solid	8015NM Prep	
890-2034-10	B-104	Total/NA	Solid	8015NM Prep	
890-2034-11	B-105	Total/NA	Solid	8015NM Prep	
890-2034-12	B-106	Total/NA	Solid	8015NM Prep	
890-2034-13	B-107	Total/NA	Solid	8015NM Prep	
890-2034-14	B-108	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

GC Semi VOA (Continued)

Prep Batch: 20819 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-15	B-109	Total/NA	Solid	8015NM Prep	
MB 880-20819/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-20819/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-20819/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12004-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-12004-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 20828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-2	SW-6	Total/NA	Solid	8015NM Prep	
890-2034-3	SW-43	Total/NA	Solid	8015NM Prep	
890-2034-4	SW-39	Total/NA	Solid	8015NM Prep	
890-2034-5	SW-38	Total/NA	Solid	8015NM Prep	
890-2034-6	B-100	Total/NA	Solid	8015NM Prep	
890-2034-7	B-101	Total/NA	Solid	8015NM Prep	
890-2034-8	B-102	Total/NA	Solid	8015NM Prep	
MB 880-20828/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-20828/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-20828/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2036-A-1-J MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2036-A-1-K MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 20911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Total/NA	Solid	8015 NM	
890-2034-2	SW-6	Total/NA	Solid	8015 NM	
890-2034-3	SW-43	Total/NA	Solid	8015 NM	
890-2034-4	SW-39	Total/NA	Solid	8015 NM	
890-2034-5	SW-38	Total/NA	Solid	8015 NM	
890-2034-6	B-100	Total/NA	Solid	8015 NM	
890-2034-7	B-101	Total/NA	Solid	8015 NM	
890-2034-8	B-102	Total/NA	Solid	8015 NM	
890-2034-9	B-103	Total/NA	Solid	8015 NM	
890-2034-10	B-104	Total/NA	Solid	8015 NM	
890-2034-11	B-105	Total/NA	Solid	8015 NM	
890-2034-12	B-106	Total/NA	Solid	8015 NM	
890-2034-13	B-107	Total/NA	Solid	8015 NM	
890-2034-14	B-108	Total/NA	Solid	8015 NM	
890-2034-15	B-109	Total/NA	Solid	8015 NM	
890-2034-16	B-110	Total/NA	Solid	8015 NM	

Analysis Batch: 20971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-16	B-110	Total/NA	Solid	8015B NM	20799
MB 880-20799/1-A	Method Blank	Total/NA	Solid	8015B NM	20799
LCS 880-20799/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	20799
LCSD 880-20799/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	20799
880-11958-A-10-C MS	Matrix Spike	Total/NA	Solid	8015B NM	20799
880-11958-A-10-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	20799

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

GC Semi VOA

Analysis Batch: 21117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-2	SW-6	Total/NA	Solid	8015B NM	20828
890-2034-3	SW-43	Total/NA	Solid	8015B NM	20828
890-2034-4	SW-39	Total/NA	Solid	8015B NM	20828
890-2034-5	SW-38	Total/NA	Solid	8015B NM	20828
890-2034-6	B-100	Total/NA	Solid	8015B NM	20828
890-2034-7	B-101	Total/NA	Solid	8015B NM	20828
890-2034-8	B-102	Total/NA	Solid	8015B NM	20828
MB 880-20828/1-A	Method Blank	Total/NA	Solid	8015B NM	20828
LCS 880-20828/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	20828
LCSD 880-20828/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	20828
890-2036-A-1-J MS	Matrix Spike	Total/NA	Solid	8015B NM	20828
890-2036-A-1-K MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	20828

Prep Batch: 21363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Total/NA	Solid	8015NM Prep	
MB 880-21363/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21363/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21363/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2054-A-1-D MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2054-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 21518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Total/NA	Solid	8015B NM	21363
MB 880-21363/1-A	Method Blank	Total/NA	Solid	8015B NM	21363
LCS 880-21363/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21363
LCSD 880-21363/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21363
890-2054-A-1-D MS	Matrix Spike	Total/NA	Solid	8015B NM	21363
890-2054-A-1-E MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	21363

HPLC/IC

Leach Batch: 20808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-2	SW-6	Soluble	Solid	DI Leach	
890-2034-3	SW-43	Soluble	Solid	DI Leach	
890-2034-4	SW-39	Soluble	Solid	DI Leach	
890-2034-5	SW-38	Soluble	Solid	DI Leach	
890-2034-6	B-100	Soluble	Solid	DI Leach	
890-2034-7	B-101	Soluble	Solid	DI Leach	
890-2034-8	B-102	Soluble	Solid	DI Leach	
890-2034-9	B-103	Soluble	Solid	DI Leach	
890-2034-10	B-104	Soluble	Solid	DI Leach	
890-2034-11	B-105	Soluble	Solid	DI Leach	
890-2034-12	B-106	Soluble	Solid	DI Leach	
890-2034-13	B-107	Soluble	Solid	DI Leach	
890-2034-14	B-108	Soluble	Solid	DI Leach	
890-2034-15	B-109	Soluble	Solid	DI Leach	
890-2034-16	B-110	Soluble	Solid	DI Leach	
MB 880-20808/1-A	Method Blank	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

HPLC/IC (Continued)

Leach Batch: 20808 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-20808/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-20808/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2034-9 MS	B-103	Soluble	Solid	DI Leach	
890-2034-9 MSD	B-103	Soluble	Solid	DI Leach	

Analysis Batch: 20964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-2	SW-6	Soluble	Solid	300.0	20808
890-2034-3	SW-43	Soluble	Solid	300.0	20808
890-2034-4	SW-39	Soluble	Solid	300.0	20808
890-2034-5	SW-38	Soluble	Solid	300.0	20808
890-2034-6	B-100	Soluble	Solid	300.0	20808
890-2034-7	B-101	Soluble	Solid	300.0	20808
890-2034-8	B-102	Soluble	Solid	300.0	20808
890-2034-9	B-103	Soluble	Solid	300.0	20808
890-2034-10	B-104	Soluble	Solid	300.0	20808
890-2034-11	B-105	Soluble	Solid	300.0	20808
890-2034-12	B-106	Soluble	Solid	300.0	20808
890-2034-13	B-107	Soluble	Solid	300.0	20808
890-2034-14	B-108	Soluble	Solid	300.0	20808
890-2034-15	B-109	Soluble	Solid	300.0	20808
890-2034-16	B-110	Soluble	Solid	300.0	20808
MB 880-20808/1-A	Method Blank	Soluble	Solid	300.0	20808
LCS 880-20808/2-A	Lab Control Sample	Soluble	Solid	300.0	20808
LCSD 880-20808/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	20808
890-2034-9 MS	B-103	Soluble	Solid	300.0	20808
890-2034-9 MSD	B-103	Soluble	Solid	300.0	20808

Leach Batch: 21022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Soluble	Solid	DI Leach	
MB 880-21022/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21022/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21022/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2047-A-1-F MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2047-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 21050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-2034-1	SW-5	Soluble	Solid	300.0	21022
MB 880-21022/1-A	Method Blank	Soluble	Solid	300.0	21022
LCS 880-21022/2-A	Lab Control Sample	Soluble	Solid	300.0	21022
LCSD 880-21022/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21022
890-2047-A-1-F MS	Matrix Spike	Soluble	Solid	300.0	21022
890-2047-A-1-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21022

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: SW-5
Date Collected: 03/01/22 08:15
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 01:40	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	21363	03/11/22 08:33	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21518	03/14/22 03:53	AJ	XEN MID
Soluble	Leach	DI Leach			5.00 g	50 mL	21022	03/08/22 10:00	CH	XEN MID
Soluble	Analysis	300.0		1			21050	03/08/22 18:26	CH	XEN MID

Client Sample ID: SW-6
Date Collected: 03/01/22 08:20
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 02:01	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20828	03/03/22 14:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/08/22 19:25	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		1			20964	03/05/22 15:39	SC	XEN MID

Client Sample ID: SW-43
Date Collected: 03/01/22 09:25
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 02:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20828	03/03/22 14:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/08/22 19:46	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		1			20964	03/05/22 15:48	SC	XEN MID

Client Sample ID: SW-39
Date Collected: 03/01/22 13:31
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 02:42	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID

Eurofins Carlsbad

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: SW-39
Date Collected: 03/01/22 13:31
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	20828	03/03/22 14:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/08/22 20:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		1			20964	03/05/22 16:15	SC	XEN MID

Client Sample ID: SW-38
Date Collected: 03/01/22 13:39
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 03:02	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20828	03/03/22 14:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/08/22 20:28	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		1			20964	03/05/22 16:23	SC	XEN MID

Client Sample ID: B-100
Date Collected: 03/01/22 12:30
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 03:22	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20828	03/03/22 14:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/08/22 20:49	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 16:32	SC	XEN MID

Client Sample ID: B-101
Date Collected: 03/01/22 12:32
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 05:12	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	20828	03/03/22 14:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/08/22 21:11	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-101
Date Collected: 03/01/22 12:32
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		10			20964	03/05/22 16:41	SC	XEN MID

Client Sample ID: B-102
Date Collected: 03/01/22 12:38
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 05:33	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20828	03/03/22 14:43	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/08/22 21:33	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		10			20964	03/05/22 16:50	SC	XEN MID

Client Sample ID: B-103
Date Collected: 03/01/22 12:40
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 05:53	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20819	03/03/22 13:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20779	03/04/22 03:06	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 16:59	SC	XEN MID

Client Sample ID: B-104
Date Collected: 03/01/22 12:42
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 06:13	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20819	03/03/22 13:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20779	03/04/22 03:27	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 17:25	SC	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-105
Date Collected: 03/01/22 12:47
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 06:34	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	20819	03/03/22 13:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20779	03/04/22 03:48	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 17:34	SC	XEN MID

Client Sample ID: B-106
Date Collected: 03/01/22 12:49
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 06:54	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20819	03/03/22 13:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20779	03/04/22 04:10	AJ	XEN MID
Soluble	Leach	DI Leach			4.99 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		20			20964	03/05/22 18:01	SC	XEN MID

Client Sample ID: B-107
Date Collected: 03/01/22 12:53
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 07:15	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20819	03/03/22 13:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20779	03/04/22 04:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 18:10	SC	XEN MID

Client Sample ID: B-108
Date Collected: 03/01/22 12:55
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 07:35	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Client Sample ID: B-108
Date Collected: 03/01/22 12:55
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	20819	03/03/22 13:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20779	03/04/22 04:52	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 18:19	SC	XEN MID

Client Sample ID: B-109
Date Collected: 03/01/22 12:57
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 07:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20819	03/03/22 13:42	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20779	03/04/22 05:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 18:28	SC	XEN MID

Client Sample ID: B-110
Date Collected: 03/01/22 13:00
Date Received: 03/01/22 15:31

Lab Sample ID: 890-2034-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	20688	03/06/22 11:20	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20859	03/07/22 08:16	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21021	03/07/22 10:04	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20911	03/04/22 13:00	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20799	03/03/22 11:15	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20971	03/07/22 05:14	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	20808	03/03/22 12:13	CH	XEN MID
Soluble	Analysis	300.0		5			20964	03/05/22 18:36	SC	XEN MID

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 890-2034-1
Project/Site: Mack PW Release SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 890-2034-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
890-2034-1	SW-5	Solid	03/01/22 08:15	03/01/22 15:31
890-2034-2	SW-6	Solid	03/01/22 08:20	03/01/22 15:31
890-2034-3	SW-43	Solid	03/01/22 09:25	03/01/22 15:31
890-2034-4	SW-39	Solid	03/01/22 13:31	03/01/22 15:31
890-2034-5	SW-38	Solid	03/01/22 13:39	03/01/22 15:31
890-2034-6	B-100	Solid	03/01/22 12:30	03/01/22 15:31
890-2034-7	B-101	Solid	03/01/22 12:32	03/01/22 15:31
890-2034-8	B-102	Solid	03/01/22 12:38	03/01/22 15:31
890-2034-9	B-103	Solid	03/01/22 12:40	03/01/22 15:31
890-2034-10	B-104	Solid	03/01/22 12:42	03/01/22 15:31
890-2034-11	B-105	Solid	03/01/22 12:47	03/01/22 15:31
890-2034-12	B-106	Solid	03/01/22 12:49	03/01/22 15:31
890-2034-13	B-107	Solid	03/01/22 12:53	03/01/22 15:31
890-2034-14	B-108	Solid	03/01/22 12:55	03/01/22 15:31
890-2034-15	B-109	Solid	03/01/22 12:57	03/01/22 15:31
890-2034-16	B-110	Solid	03/01/22 13:00	03/01/22 15:31

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No. 2275

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

890-2034 Chain of Custody

DATE: 3/1/2022 PAGE 1 OF 2

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE
Time zone/State: MST/NM

PRESERVATION: HCl, HNO_3, H_2SO_4 ☐ NaOH, ICE, UNPRESSERVED

ANALYSES: BTEX ☒ MTBE ☐ | TRPH 418.1 ☐ | TPH 1005 ☐ TPH 1006 ☐ | GASOLINE MOD 8015 ☒ | DIESEL - MOD 8015 ☒ | OIL - MOD 8015 ☒ | VOC 8260 ☐ | SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐ | 8081 PESTICIDES ☐ 8151 HERBICIDES ☐ | 6862 PCBS ☐ | TCLP - METALS (RCRA) ☐ TCLP VOC ☐ | TCLP - PEST ☐ HERB ☐ Semi-VOC ☐ | TOTAL METALS (RCRA) ☐ OTHER LIST ☐ | LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐ | RCI ☐ TOX ☐ FLASHPOINT ☐ | TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐ | pH ☐ HEXAVALENT CHROMIUM ☐ | EXPLOSIVES ☐ PECHLORATE ☐ | CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐

Field Sample I.D	Lab #	Date	Time	Matrix	# of Containers	HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	6862 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
SW-5		3/1/2022	0815	S	1				X		X			X	X	X													X	
SW-6		3/1/22	0820	S	1				X		X			X	X	X													X	
SW-43		3/1/22	0925	S	1				X		X			X	X	X													X	
SW-39		3/1/22	1331	S	1				X		X			X	X	X													X	
SW-38		3/1/22	1339	S	1				X		X			X	X	X													X	
B-100		3/1/22	1230	S	1				X		X			X	X	X													X	
B-101		3/1/22	1232	S	1				X		X			X	X	X													X	
B-102		3/1/22	1238	S	1				X		X			X	X	X													X	
B-103		3/1/22	1240	S	1				X		X			X	X	X													X	
B-104		3/1/22	1242	S	1				X		X			X	X	X													X	
B-105		3/1/22	1247	S	1				X		X			X	X	X													X	
B-106		3/1/22	1249	S	1				X		X			X	X	X													X	
B-107		3/1/22	1253	S	1				X		X			X	X	X													X	
B-108		3/1/22	1255	S	1				X		X			X	X	X													X	
B-109		3/1/22	1257	S	1				X		X			X	X	X													X	
TOTAL 15																														

RELINQUISHED BY (Signature) DATE/TIME 3/1/2022 RECEIVED BY (Signature)

RELINQUISHED BY (Signature) DATE/TIME 3-1-22 1531 RECEIVED BY (Signature)

RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature)

LABORATORY: XENCO

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 21.2/21.0 THERM# TNM-007
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☒ NOT USED
☐ CARRIER BILL # CIP-Cooling In Process
☒ HAND DELIVERED

3/16/2022 (Rev. 1)

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Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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No. 2276

CHAIN-OF-CUSTODY

Carson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 3/1/2022 PAGE 2 OF 2

PO#: _____ LAB WORK ORDER#: _____

PROJECT LOCATION OR NAME: MAPLE PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: BSG

Data Reported to

TRRP report? ☐ Yes ☒ No

TIME ZONE
Time zone/State
MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO3	H2SO4 ☐ NaOH	ICE	UNPRESSERVED	ANALYSES: BTEX ☐ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	8081 PESTICIDES ☐	PAH 8270 ☐ HOLDPAH ☐	8082 PCBs ☐	8151 HERBICIDES ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐ HERB ☐	Semi-VOC ☐	TOTAL METALS (RCRA) ☐	OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐	TCLP ☐	TOX ☐	FLASHPOINT ☐	TDS ☐ TSS ☐	% MOISTURE ☐	pH ☐	HEXAVALENT CHROMIUM ☐	CYANIDE ☐	EXPLOSIVES ☐	PECHLORATE ☐	CHLORIDE ☐ ANIONS ☐	ALKALINITY ☐	FIELD NOTES
B-110		3/1/22	1300	S	1				X		X			X	X	X																				X				

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 890-2034-1
SDG Number: 21-0105-04

Login Number: 2034
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 890-2034-1
SDG Number: 21-0105-04

Login Number: 2034
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 03/03/22 10:59 AM

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

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-12069-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW Release

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
3/17/2022 9:10:28 AM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Laboratory Job ID: 880-12069-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-12069-1
Project/Site: Mack PW Release SDG: 21-0105-04

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Job ID: 880-12069-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-12069-1

Comments
No additional comments.

Receipt
The samples were received on 3/4/2022 3:54 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.1° C.

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21146 and analytical batch 880-21440 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.

Method 8021B: Surrogate recovery for the following samples were outside control limits: B-127 4.1' (880-12069-9) and B-136 (880-12069-18). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21011 and analytical batch 880-21405 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

GC Semi VOA
Method 8015B NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-21111/2-A) and (LCSD 880-21111/3-A). Evidence of matrix interferences is not obvious.

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

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

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

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: SW-24 0-4.1'

Date Collected: 03/04/22 08:10
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-1

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *- F1	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:31	1
Toluene	<0.00200	U *- F1	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:31	1
Ethylbenzene	<0.00200	U *- F1	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:31	1
m,p-Xylenes	<0.00399	U *- F1	0.00399		mg/Kg		03/10/22 09:50	03/12/22 19:31	1
o-Xylene	<0.00200	U *- F1	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:31	1
Xylenes, Total	<0.00399	U *- F1	0.00399		mg/Kg		03/10/22 09:50	03/12/22 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*03/10/22 09:50*	*03/12/22 19:31*	*1*
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*03/10/22 09:50*	*03/12/22 19:31*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/08/22 13:23	03/12/22 13:43	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/08/22 13:23	03/12/22 13:43	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/08/22 13:23	03/12/22 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*03/08/22 13:23*	*03/12/22 13:43*	*1*
o-Terphenyl (Surr)	*101*		*70 - 130*	*03/08/22 13:23*	*03/12/22 13:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<4.99	U	4.99		mg/Kg			03/10/22 15:01	1

Client Sample ID: SW-11 0-4.1'

Date Collected: 03/04/22 08:33
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 19:58	1
Toluene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 19:58	1
Ethylbenzene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 19:58	1
m,p-Xylenes	<0.00402	U *-	0.00402		mg/Kg		03/10/22 09:50	03/12/22 19:58	1
o-Xylene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 19:58	1
Xylenes, Total	<0.00402	U *-	0.00402		mg/Kg		03/10/22 09:50	03/12/22 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*03/10/22 09:50*	*03/12/22 19:58*	*1*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*	*03/10/22 09:50*	*03/12/22 19:58*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: SW-11 0-4.1'

Lab Sample ID: 880-12069-2
Matrix: Solid
Date Collected: 03/04/22 08:33
Date Received: 03/04/22 15:54

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 14:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 14:47	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*113*		*70 - 130*	*03/08/22 13:23*	*03/12/22 14:47*	*1*
o-Terphenyl (Surr)	*110*		*70 - 130*	*03/08/22 13:23*	*03/12/22 14:47*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71.3**		5.05		mg/Kg			03/10/22 15:07	1

Client Sample ID: B-121 4.1'

Lab Sample ID: 880-12069-3
Matrix: Solid
Date Collected: 03/04/22 10:35
Date Received: 03/04/22 15:54

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 20:26	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 20:26	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 20:26	1
m,p-Xylenes	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/12/22 20:26	1
o-Xylene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 20:26	1
Xylenes, Total	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/12/22 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*	*S1-*	*70 - 130*	*03/10/22 09:50*	*03/12/22 20:26*	*1*
1,4-Difluorobenzene (Surr)	*83*		*70 - 130*	*03/10/22 09:50*	*03/12/22 20:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/08/22 13:23	03/12/22 15:08	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/08/22 13:23	03/12/22 15:08	1

Eurofins Midland

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-121 4.1'

Date Collected: 03/04/22 10:35
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/08/22 13:23	03/12/22 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*113*		*70 - 130*	*03/08/22 13:23*	*03/12/22 15:08*	*1*
o-Terphenyl (Surr)	*112*		*70 - 130*	*03/08/22 13:23*	*03/12/22 15:08*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3040**		25.2		mg/Kg			03/10/22 15:12	5

Client Sample ID: B-122 4.1'

Date Collected: 03/04/22 10:36
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-4
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/12/22 20:54	1
Toluene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/12/22 20:54	1
Ethylbenzene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/12/22 20:54	1
m,p-Xylenes	<0.00403	U *-	0.00403		mg/Kg		03/10/22 09:50	03/12/22 20:54	1
o-Xylene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/12/22 20:54	1
Xylenes, Total	<0.00403	U *-	0.00403		mg/Kg		03/10/22 09:50	03/12/22 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*70 - 130*	*03/10/22 09:50*	*03/12/22 20:54*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*03/10/22 09:50*	*03/12/22 20:54*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/08/22 13:23	03/12/22 15:30	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/08/22 13:23	03/12/22 15:30	1
Oll Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/08/22 13:23	03/12/22 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*112*		*70 - 130*	*03/08/22 13:23*	*03/12/22 15:30*	*1*
o-Terphenyl (Surr)	*110*		*70 - 130*	*03/08/22 13:23*	*03/12/22 15:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6630**		49.8		mg/Kg			03/10/22 15:18	10

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-123 4.1'

Date Collected: 03/04/22 10:37
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-5

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/12/22 21:21	1
Toluene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/12/22 21:21	1
Ethylbenzene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/12/22 21:21	1
m,p-Xylenes	<0.00398	U *-	0.00398		mg/Kg		03/10/22 09:50	03/12/22 21:21	1
o-Xylene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/12/22 21:21	1
Xylenes, Total	<0.00398	U *-	0.00398		mg/Kg		03/10/22 09:50	03/12/22 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*	*03/10/22 09:50*	*03/12/22 21:21*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*03/10/22 09:50*	*03/12/22 21:21*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 15:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 15:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*114*		*70 - 130*	*03/08/22 13:23*	*03/12/22 15:51*	*1*
o-Terphenyl (Surr)	*117*		*70 - 130*	*03/08/22 13:23*	*03/12/22 15:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21500**		248		mg/Kg			03/10/22 15:24	50

Client Sample ID: B-124 4.1'

Date Collected: 03/04/22 10:38
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-6

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 21:49	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 21:49	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 21:49	1
m,p-Xylenes	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/12/22 21:49	1
o-Xylene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 21:49	1
Xylenes, Total	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/12/22 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*03/10/22 09:50*	*03/12/22 21:49*	*1*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*	*03/10/22 09:50*	*03/12/22 21:49*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-124 4.1'

Lab Sample ID: 880-12069-6
Matrix: Solid
Date Collected: 03/04/22 10:38
Date Received: 03/04/22 15:54

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 16:12	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 16:12	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*107*		*70 - 130*	*03/08/22 13:23*	*03/12/22 16:12*	*1*
o-Terphenyl (Surr)	*108*		*70 - 130*	*03/08/22 13:23*	*03/12/22 16:12*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**222**		4.95		mg/Kg			03/10/22 15:30	1

Client Sample ID: B125- 4.1'

Lab Sample ID: 880-12069-7
Matrix: Solid
Date Collected: 03/04/22 10:39
Date Received: 03/04/22 15:54

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 22:16	1
Toluene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 22:16	1
Ethylbenzene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 22:16	1
m,p-Xylenes	<0.00402	U *-	0.00402		mg/Kg		03/10/22 09:50	03/12/22 22:16	1
o-Xylene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/12/22 22:16	1
Xylenes, Total	<0.00402	U *-	0.00402		mg/Kg		03/10/22 09:50	03/12/22 22:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*70 - 130*	*03/10/22 09:50*	*03/12/22 22:16*	*1*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*	*03/10/22 09:50*	*03/12/22 22:16*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/08/22 13:23	03/12/22 16:33	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/08/22 13:23	03/12/22 16:33	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B125- 4.1'

Date Collected: 03/04/22 10:39
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-7

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/08/22 13:23	03/12/22 16:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*109*		*70 - 130*	*03/08/22 13:23*	*03/12/22 16:33*	*1*
o-Terphenyl (Surr)	*109*		*70 - 130*	*03/08/22 13:23*	*03/12/22 16:33*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**330**		5.00		mg/Kg			03/10/22 15:36	1

Client Sample ID: B-126 4.1'

Date Collected: 03/04/22 10:40
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-8

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 22:44	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 22:44	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 22:44	1
m,p-Xylenes	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/12/22 22:44	1
o-Xylene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/12/22 22:44	1
Xylenes, Total	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/12/22 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*134*	*S1+*	*70 - 130*	*03/10/22 09:50*	*03/12/22 22:44*	*1*
1,4-Difluorobenzene (Surr)	*84*		*70 - 130*	*03/10/22 09:50*	*03/12/22 22:44*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 16:54	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 16:54	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*110*		*70 - 130*	*03/08/22 13:23*	*03/12/22 16:54*	*1*
o-Terphenyl (Surr)	*112*		*70 - 130*	*03/08/22 13:23*	*03/12/22 16:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**705**		5.00		mg/Kg			03/11/22 21:44	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-127 4.1'

Lab Sample ID: 880-12069-9
Matrix: Solid
Date Collected: 03/04/22 10:41
Date Received: 03/04/22 15:54

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:24	1
Toluene	**0.00234**		0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:24	1
Ethylbenzene	**0.00321**		0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:24	1
m,p-Xylenes	**0.00478**		0.00398		mg/Kg		03/13/22 12:58	03/14/22 00:24	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:24	1
Xylenes, Total	**0.00478**		0.00398		mg/Kg		03/13/22 12:58	03/14/22 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*48*	*S1-*	*70 - 130*	*03/13/22 12:58*	*03/14/22 00:24*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/13/22 12:58*	*03/14/22 00:24*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0103**		0.00398		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 17:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 17:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*112*		*70 - 130*	*03/08/22 13:23*	*03/12/22 17:14*	*1*
o-Terphenyl (Surr)	*110*		*70 - 130*	*03/08/22 13:23*	*03/12/22 17:14*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**333**		4.99		mg/Kg			03/11/22 22:02	1

Client Sample ID: B-128 4.1'

Lab Sample ID: 880-12069-10
Matrix: Solid
Date Collected: 03/04/22 10:42
Date Received: 03/04/22 15:54

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:44	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		03/13/22 12:58	03/14/22 00:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/13/22 12:58	03/14/22 00:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/13/22 12:58	03/14/22 00:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/13/22 12:58*	*03/14/22 00:44*	*1*
1,4-Difluorobenzene (Surr)	*94*		*70 - 130*	*03/13/22 12:58*	*03/14/22 00:44*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-128 4.1'

Date Collected: 03/04/22 10:42
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-10
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.4**		49.9		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/08/22 08:38	03/09/22 03:56	1
Diesel Range Organics (Over C10-C28)	**60.4**	***+**	49.9		mg/Kg		03/08/22 08:38	03/09/22 03:56	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/08/22 08:38	03/09/22 03:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*86*		*70 - 130*	*03/08/22 08:38*	*03/09/22 03:56*	*1*
o-Terphenyl (Surr)	*85*		*70 - 130*	*03/08/22 08:38*	*03/09/22 03:56*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**843**		4.97		mg/Kg			03/11/22 22:07	1

Client Sample ID: B-129 4.1'

Date Collected: 03/04/22 10:43
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-11
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/13/22 01:25	1
Toluene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/13/22 01:25	1
Ethylbenzene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/13/22 01:25	1
m,p-Xylenes	<0.00402	U *-	0.00402		mg/Kg		03/10/22 09:50	03/13/22 01:25	1
o-Xylene	<0.00201	U *-	0.00201		mg/Kg		03/10/22 09:50	03/13/22 01:25	1
Xylenes, Total	<0.00402	U *-	0.00402		mg/Kg		03/10/22 09:50	03/13/22 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/10/22 09:50*	*03/13/22 01:25*	*1*
1,4-Difluorobenzene (Surr)	*114*		*70 - 130*	*03/10/22 09:50*	*03/13/22 01:25*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/08/22 08:38	03/09/22 04:17	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		03/08/22 08:38	03/09/22 04:17	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-129 4.1'

Lab Sample ID: 880-12069-11
Matrix: Solid
Date Collected: 03/04/22 10:43
Date Received: 03/04/22 15:54

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/08/22 08:38	03/09/22 04:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*96*		*70 - 130*	*03/08/22 08:38*	*03/09/22 04:17*	*1*
o-Terphenyl (Surr)	*97*		*70 - 130*	*03/08/22 08:38*	*03/09/22 04:17*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4860**		50.0		mg/Kg			03/11/22 22:13	10

Client Sample ID: B-130 4.1'

Lab Sample ID: 880-12069-12
Matrix: Solid
Date Collected: 03/04/22 10:44
Date Received: 03/04/22 15:54

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 01:52	1
Toluene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 01:52	1
Ethylbenzene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 01:52	1
m,p-Xylenes	<0.00398	U *-	0.00398		mg/Kg		03/10/22 09:50	03/13/22 01:52	1
o-Xylene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 01:52	1
Xylenes, Total	<0.00398	U *-	0.00398		mg/Kg		03/10/22 09:50	03/13/22 01:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*	*03/10/22 09:50*	*03/13/22 01:52*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*03/10/22 09:50*	*03/13/22 01:52*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 04:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		03/08/22 08:38	03/09/22 04:38	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 04:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*95*		*70 - 130*	*03/08/22 08:38*	*03/09/22 04:38*	*1*
o-Terphenyl (Surr)	*98*		*70 - 130*	*03/08/22 08:38*	*03/09/22 04:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3030**		49.9		mg/Kg			03/11/22 22:19	10

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-131 4.1'

Date Collected: 03/04/22 10:45
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-13
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 03:19	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 03:19	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 03:19	1
m,p-Xylenes	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/13/22 03:19	1
o-Xylene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 03:19	1
Xylenes, Total	<0.00401	U *-	0.00401		mg/Kg		03/10/22 09:50	03/13/22 03:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*03/10/22 09:50*	*03/13/22 03:19*	*1*
1,4-Difluorobenzene (Surr)	*118*		*70 - 130*	*03/10/22 09:50*	*03/13/22 03:19*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**60.8**		50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 05:00	1
Diesel Range Organics (Over C10-C28)	**60.8**	***+**	50.0		mg/Kg		03/08/22 08:38	03/09/22 05:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 05:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*91*		*70 - 130*	*03/08/22 08:38*	*03/09/22 05:00*	*1*
o-Terphenyl (Surr)	*88*		*70 - 130*	*03/08/22 08:38*	*03/09/22 05:00*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**9220**		49.8		mg/Kg			03/16/22 18:25	10

Client Sample ID: B-132 4.1'

Date Collected: 03/04/22 10:46
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-14
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:06	1
m,p-Xylenes	<0.00401	U	0.00401		mg/Kg		03/11/22 08:50	03/11/22 20:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:06	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/11/22 08:50	03/11/22 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*03/11/22 08:50*	*03/11/22 20:06*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*03/11/22 08:50*	*03/11/22 20:06*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-132 4.1'

Date Collected: 03/04/22 10:46
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-14
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 05:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		03/08/22 08:38	03/09/22 05:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 05:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*85*		*70 - 130*	*03/08/22 08:38*	*03/09/22 05:22*	*1*
o-Terphenyl (Surr)	*83*		*70 - 130*	*03/08/22 08:38*	*03/09/22 05:22*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1150**		25.2		mg/Kg			03/16/22 00:29	5

Client Sample ID: B- 133 4.1'

Date Collected: 03/04/22 10:47
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-15
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:26	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		03/11/22 08:50	03/11/22 20:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 20:26	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/11/22 08:50	03/11/22 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*70 - 130*	*03/11/22 08:50*	*03/11/22 20:26*	*1*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*	*03/11/22 08:50*	*03/11/22 20:26*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/08/22 08:38	03/09/22 05:42	1
Diesel Range Organics (Over C10-C28)	<49.9	U *+	49.9		mg/Kg		03/08/22 08:38	03/09/22 05:42	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B- 133 4.1'

Lab Sample ID: 880-12069-15
Matrix: Solid
Date Collected: 03/04/22 10:47
Date Received: 03/04/22 15:54

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/08/22 08:38	03/09/22 05:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*109*		*70 - 130*	*03/08/22 08:38*	*03/09/22 05:42*	*1*
o-Terphenyl (Surr)	*109*		*70 - 130*	*03/08/22 08:38*	*03/09/22 05:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6770**		49.5		mg/Kg			03/11/22 22:49	10

Client Sample ID: B-134

Lab Sample ID: 880-12069-16
Matrix: Solid
Date Collected: 03/04/22 10:48
Date Received: 03/04/22 15:54

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 03:46	1
Toluene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 03:46	1
Ethylbenzene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 03:46	1
m,p-Xylenes	<0.00398	U *-	0.00398		mg/Kg		03/10/22 09:50	03/13/22 03:46	1
o-Xylene	<0.00199	U *-	0.00199		mg/Kg		03/10/22 09:50	03/13/22 03:46	1
Xylenes, Total	<0.00398	U *-	0.00398		mg/Kg		03/10/22 09:50	03/13/22 03:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*81*		*70 - 130*	*03/10/22 09:50*	*03/13/22 03:46*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*03/10/22 09:50*	*03/13/22 03:46*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 06:04	1
Diesel Range Organics (Over C10-C28)	<50.0	U *+	50.0		mg/Kg		03/08/22 08:38	03/09/22 06:04	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/09/22 06:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*106*		*70 - 130*	*03/08/22 08:38*	*03/09/22 06:04*	*1*
o-Terphenyl (Surr)	*105*		*70 - 130*	*03/08/22 08:38*	*03/09/22 06:04*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**2650**		25.2		mg/Kg			03/11/22 22:55	5

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-135

Date Collected: 03/04/22 10:49
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-17

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/13/22 04:13	1
Toluene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/13/22 04:13	1
Ethylbenzene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/13/22 04:13	1
m,p-Xylenes	<0.00403	U *-	0.00403		mg/Kg		03/10/22 09:50	03/13/22 04:13	1
o-Xylene	<0.00202	U *-	0.00202		mg/Kg		03/10/22 09:50	03/13/22 04:13	1
Xylenes, Total	<0.00403	U *-	0.00403		mg/Kg		03/10/22 09:50	03/13/22 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*03/10/22 09:50*	*03/13/22 04:13*	*1*
1,4-Difluorobenzene (Surr)	*67*	*S1-*	*70 - 130*	*03/10/22 09:50*	*03/13/22 04:13*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 01:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 01:40	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 01:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*96*		*70 - 130*	*03/08/22 08:46*	*03/09/22 01:40*	*1*
o-Terphenyl (Surr)	*85*		*70 - 130*	*03/08/22 08:46*	*03/09/22 01:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**4240**		50.2		mg/Kg			03/11/22 23:00	10

Client Sample ID: B-136

Date Collected: 03/04/22 10:50
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-18

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/13/22 12:58	03/14/22 01:05	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/13/22 12:58	03/14/22 01:05	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/13/22 12:58	03/14/22 01:05	1
m,p-Xylenes	**0.00876**		0.00397		mg/Kg		03/13/22 12:58	03/14/22 01:05	1
o-Xylene	**0.00332**		0.00198		mg/Kg		03/13/22 12:58	03/14/22 01:05	1
Xylenes, Total	**0.0121**		0.00397		mg/Kg		03/13/22 12:58	03/14/22 01:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*55*	*S1-*	*70 - 130*	*03/13/22 12:58*	*03/14/22 01:05*	*1*
1,4-Difluorobenzene (Surr)	*87*		*70 - 130*	*03/13/22 12:58*	*03/14/22 01:05*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-136

Date Collected: 03/04/22 10:50
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-18
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0121**		0.00397		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 02:03	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 02:03	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 02:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*102*		*70 - 130*	*03/08/22 08:46*	*03/09/22 02:03*	*1*
o-Terphenyl (Surr)	*101*		*70 - 130*	*03/08/22 08:46*	*03/09/22 02:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1230**		25.0		mg/Kg			03/11/22 23:06	5

Client Sample ID: B-137

Date Collected: 03/04/22 10:51
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-19
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 05:07	1
Toluene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 05:07	1
Ethylbenzene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 05:07	1
m,p-Xylenes	<0.00400	U *-	0.00400		mg/Kg		03/10/22 09:50	03/13/22 05:07	1
o-Xylene	<0.00200	U *-	0.00200		mg/Kg		03/10/22 09:50	03/13/22 05:07	1
Xylenes, Total	<0.00400	U *-	0.00400		mg/Kg		03/10/22 09:50	03/13/22 05:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*03/10/22 09:50*	*03/13/22 05:07*	*1*
1,4-Difluorobenzene (Surr)	*68*	*S1-*	*70 - 130*	*03/10/22 09:50*	*03/13/22 05:07*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 02:25	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 02:25	1

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Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-137

Date Collected: 03/04/22 10:51
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-19
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*112*		*70 - 130*	*03/08/22 08:46*	*03/09/22 02:25*	*1*
o-Terphenyl (Surr)	*99*		*70 - 130*	*03/08/22 08:46*	*03/09/22 02:25*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**90.4**		4.98		mg/Kg			03/11/22 23:24	1

Client Sample ID: B-138

Date Collected: 03/04/22 10:52
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-20
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *-	0.00198		mg/Kg		03/10/22 09:50	03/13/22 05:33	1
Toluene	<0.00198	U *-	0.00198		mg/Kg		03/10/22 09:50	03/13/22 05:33	1
Ethylbenzene	<0.00198	U *-	0.00198		mg/Kg		03/10/22 09:50	03/13/22 05:33	1
m,p-Xylenes	<0.00396	U *-	0.00396		mg/Kg		03/10/22 09:50	03/13/22 05:33	1
o-Xylene	<0.00198	U *-	0.00198		mg/Kg		03/10/22 09:50	03/13/22 05:33	1
Xylenes, Total	<0.00396	U *-	0.00396		mg/Kg		03/10/22 09:50	03/13/22 05:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*	*03/10/22 09:50*	*03/13/22 05:33*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*03/10/22 09:50*	*03/13/22 05:33*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/08/22 08:46	03/09/22 02:48	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/08/22 08:46	03/09/22 02:48	1
Oll Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/08/22 08:46	03/09/22 02:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*116*		*70 - 130*	*03/08/22 08:46*	*03/09/22 02:48*	*1*
o-Terphenyl (Surr)	*107*		*70 - 130*	*03/08/22 08:46*	*03/09/22 02:48*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**234**		4.95		mg/Kg			03/11/22 23:30	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-139

Date Collected: 03/04/22 10:53
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-21

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:45	03/11/22 15:01	1
Toluene	**0.0245**		0.00199		mg/Kg		03/11/22 08:45	03/11/22 15:01	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:45	03/11/22 15:01	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		03/11/22 08:45	03/11/22 15:01	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:45	03/11/22 15:01	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/11/22 08:45	03/11/22 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*	*03/11/22 08:45*	*03/11/22 15:01*	*1*
1,4-Difluorobenzene (Surr)	*93*		*70 - 130*	*03/11/22 08:45*	*03/11/22 15:01*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	**0.0245**		0.00398		mg/Kg			03/11/22 18:22	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/09/22 18:43	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 03:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 03:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/09/22 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*117*		*70 - 130*	*03/08/22 08:46*	*03/09/22 03:10*	*1*
o-Terphenyl (Surr)	*102*		*70 - 130*	*03/08/22 08:46*	*03/09/22 03:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**167**		4.96		mg/Kg			03/11/22 23:47	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-12069-1	SW-24 0-4.1'	98	115
880-12069-1 MS	SW-24 0-4.1'	84	129
880-12069-1 MSD	SW-24 0-4.1'	83	122
880-12069-2	SW-11 0-4.1'	109	86
880-12069-3	B-121 4.1'	66 S1-	83
880-12069-4	B-122 4.1'	74	110
880-12069-5	B-123 4.1'	138 S1+	90
880-12069-6	B-124 4.1'	93	120
880-12069-7	B125- 4.1'	80	107
880-12069-8	B-126 4.1'	134 S1+	84
880-12069-9	B-127 4.1'	48 S1-	93
880-12069-10	B-128 4.1'	100	94
880-12069-11	B-129 4.1'	100	114
880-12069-12	B-130 4.1'	77	105
880-12069-13	B-131 4.1'	85	118
880-12069-14	B-132 4.1'	111	103
880-12069-15	B- 133 4.1'	109	102
880-12069-16	B-134	81	112
880-12069-17	B-135	108	67 S1-
880-12069-18	B-136	55 S1-	87
880-12069-19	B-137	89	68 S1-
880-12069-20	B-138	89	119
880-12069-21	B-139	85	93
880-12254-A-1-E MS	Matrix Spike	102	104
880-12254-A-1-F MSD	Matrix Spike Duplicate	102	103
880-12263-A-1-H MS	Matrix Spike	112	95
880-12263-A-1-I MSD	Matrix Spike Duplicate	2911 S1+	176 S1+
880-12301-A-6-B MS	Matrix Spike	113	110
880-12301-A-6-C MSD	Matrix Spike Duplicate	112	112
LCS 880-21011/1-A	Lab Control Sample	90	123
LCS 880-21146/1-A	Lab Control Sample	94	98
LCS 880-21364/1-A	Lab Control Sample	96	104
LCS 880-21365/1-A	Lab Control Sample	94	103
LCSD 880-21011/2-A	Lab Control Sample Dup	93	113
LCSD 880-21146/2-A	Lab Control Sample Dup	97	101
LCSD 880-21364/2-A	Lab Control Sample Dup	103	109
LCSD 880-21365/2-A	Lab Control Sample Dup	97	98
MB 880-21011/5-A	Method Blank	56 S1-	110
MB 880-21012/5-A	Method Blank	95	100
MB 880-21146/5-A	Method Blank	97	99
MB 880-21364/5-A	Method Blank	104	104
MB 880-21365/5-A	Method Blank	97	101

Surrogate Legend

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

Surrogate Summary

Client: Larson & Associates, Inc. Job ID: 880-12069-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) 1CO1 (70-130)	OTPH1 (70-130)
880-12068-A-1-C MS	Matrix Spike	102	94
880-12068-A-1-D MSD	Matrix Spike Duplicate	116	108
880-12069-1	SW-24 0-4.1'	102	101
880-12069-1 MS	SW-24 0-4.1'	112	101
880-12069-1 MSD	SW-24 0-4.1'	113	100
880-12069-2	SW-11 0-4.1'	113	110
880-12069-3	B-121 4.1'	113	112
880-12069-4	B-122 4.1'	112	110
880-12069-5	B-123 4.1'	114	117
880-12069-6	B-124 4.1'	107	108
880-12069-7	B125- 4.1'	109	109
880-12069-8	B-126 4.1'	110	112
880-12069-9	B-127 4.1'	112	110
880-12069-10	B-128 4.1'	86	85
880-12069-11	B-129 4.1'	96	97
880-12069-12	B-130 4.1'	95	98
880-12069-13	B-131 4.1'	91	88
880-12069-14	B-132 4.1'	85	83
880-12069-15	B- 133 4.1'	109	109
880-12069-16	B-134	106	105
880-12069-17	B-135	96	85
880-12069-18	B-136	102	101
880-12069-19	B-137	112	99
880-12069-20	B-138	116	107
880-12069-21	B-139	117	102
880-12075-A-21-B MS	Matrix Spike	106	86
880-12075-A-21-C MSD	Matrix Spike Duplicate	110	89
LCS 880-21112/2-A	Lab Control Sample	102	89
LCS 880-21150/2-A	Lab Control Sample	111	109
LCSD 880-21112/3-A	Lab Control Sample Dup	106	93
LCSD 880-21150/3-A	Lab Control Sample Dup	102	100
MB 880-21112/1-A	Method Blank	137 S1+	139 S1+
MB 880-21150/1-A	Method Blank	95	103

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

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

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits) 1CO2 (70-130)	OTPH2 (70-130)
LCS 880-21111/2-A	Lab Control Sample	125	142 S1+
LCSD 880-21111/3-A	Lab Control Sample Dup	122	141 S1+
MB 880-21111/1-A	Method Blank	109	115

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-21011/5-A
Matrix: Solid
Analysis Batch: 21405

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21011

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:04	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:04	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:04	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		03/10/22 09:50	03/12/22 19:04	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/10/22 09:50	03/12/22 19:04	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/10/22 09:50	03/12/22 19:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*56*	*S1-*	*70 - 130*	*03/10/22 09:50*	*03/12/22 19:04*	*1*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*	*03/10/22 09:50*	*03/12/22 19:04*	*1*

Lab Sample ID: LCS 880-21011/1-A
Matrix: Solid
Analysis Batch: 21405

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21011

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1207		mg/Kg		121	70 - 130		
Toluene			0.100	0.1094		mg/Kg		109	70 - 130		
Ethylbenzene			0.100	0.1197		mg/Kg		120	70 - 130		
m,p-Xylenes			0.200	0.2441		mg/Kg		122	70 - 130		
o-Xylene			0.100	0.1161		mg/Kg		116	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*

Lab Sample ID: LCSD 880-21011/2-A
Matrix: Solid
Analysis Batch: 21405

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21011

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1168		mg/Kg		117	70 - 130	3	35
Toluene			0.100	0.1066		mg/Kg		107	70 - 130	3	35
Ethylbenzene			0.100	0.1141		mg/Kg		114	70 - 130	5	35
m,p-Xylenes			0.200	0.2353		mg/Kg		118	70 - 130	4	35
o-Xylene			0.100	0.1152		mg/Kg		115	70 - 130	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*113*		*70 - 130*

Lab Sample ID: 880-12069-1 MS
Matrix: Solid
Analysis Batch: 21405

Client Sample ID: SW-24 0-4.1'
Prep Type: Total/NA
Prep Batch: 21011

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U *- F1	0.200	0.07164	F1	mg/Kg		36	70 - 130		
Toluene	<0.00200	U *- F1	0.200	0.06414	F1	mg/Kg		32	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: 880-12069-1 MS — **Client Sample ID: SW-24 0-4.1'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 21405 — **Prep Batch: 21011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U *- F1	0.200	0.07119	F1	mg/Kg		36	70 - 130
m,p-Xylenes	<0.00399	U *- F1	0.401	0.1425	F1	mg/Kg		36	70 - 130
o-Xylene	<0.00200	U *- F1	0.200	0.07191	F1	mg/Kg		36	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*
1,4-Difluorobenzene (Surr)	*129*		*70 - 130*

Lab Sample ID: 880-12069-1 MSD — **Client Sample ID: SW-24 0-4.1'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 21405 — **Prep Batch: 21011**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U *- F1	0.200	0.06276	F1	mg/Kg		31	70 - 130	13	35
Toluene	<0.00200	U *- F1	0.200	0.05739	F1	mg/Kg		29	70 - 130	11	35
Ethylbenzene	<0.00200	U *- F1	0.200	0.06122	F1	mg/Kg		31	70 - 130	15	35
m,p-Xylenes	<0.00399	U *- F1	0.399	0.1213	F1	mg/Kg		30	70 - 130	16	35
o-Xylene	<0.00200	U *- F1	0.200	0.06450	F1	mg/Kg		32	70 - 130	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*

Lab Sample ID: MB 880-21012/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 21440 — **Prep Batch: 21012**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/11/22 16:00	03/13/22 07:08	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/11/22 16:00	03/13/22 07:08	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/11/22 16:00	03/13/22 07:08	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/11/22 16:00	03/13/22 07:08	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		03/11/22 16:00	03/13/22 07:08	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		03/11/22 16:00	03/13/22 07:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*03/11/22 16:00*	*03/13/22 07:08*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*	*03/11/22 16:00*	*03/13/22 07:08*	*1*

Lab Sample ID: MB 880-21146/5-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 21440 — **Prep Batch: 21146**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		03/13/22 12:58	03/13/22 19:01	1
Toluene	<0.00200	U	0.00200	mg/Kg		03/13/22 12:58	03/13/22 19:01	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		03/13/22 12:58	03/13/22 19:01	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		03/13/22 12:58	03/13/22 19:01	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-21146/5-A
Matrix: Solid
Analysis Batch: 21440

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21146

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/13/22 12:58	03/13/22 19:01	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/13/22 12:58	03/13/22 19:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*03/13/22 12:58*	*03/13/22 19:01*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*03/13/22 12:58*	*03/13/22 19:01*	*1*

Lab Sample ID: LCS 880-21146/1-A
Matrix: Solid
Analysis Batch: 21440

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21146

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09993		mg/Kg		100	70 - 130		
Toluene			0.100	0.09490		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09416		mg/Kg		94	70 - 130		
m,p-Xylenes			0.200	0.2203		mg/Kg		110	70 - 130		
o-Xylene			0.100	0.1080		mg/Kg		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-21146/2-A
Matrix: Solid
Analysis Batch: 21440

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21146

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1051		mg/Kg		105	70 - 130	5	35
Toluene			0.100	0.1004		mg/Kg		100	70 - 130	6	35
Ethylbenzene			0.100	0.09886		mg/Kg		99	70 - 130	5	35
m,p-Xylenes			0.200	0.2316		mg/Kg		116	70 - 130	5	35
o-Xylene			0.100	0.1131		mg/Kg		113	70 - 130	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: 880-12263-A-1-H MS
Matrix: Solid
Analysis Batch: 21440

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21146

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U F1	0.100	0.04828	F1	mg/Kg		48	70 - 130		
Toluene	<0.00199	U F2 F1	0.100	0.05479	F1	mg/Kg		54	70 - 130		
Ethylbenzene	<0.00199	U F2 F1	0.100	0.06147	F1	mg/Kg		61	70 - 130		
m,p-Xylenes	<0.00398	U F2 F1	0.200	0.1430		mg/Kg		71	70 - 130		
o-Xylene	<0.00199	U F2 F1	0.100	0.07492		mg/Kg		75	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: 880-12263-A-1-H MS
Matrix: Solid
Analysis Batch: 21440

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21146

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-12263-A-1-I MSD
Matrix: Solid
Analysis Batch: 21440

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 21146

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.0996	0.04152	F1	mg/Kg		42	70 - 130	15	35
Toluene	<0.00199	U F2 F1	0.0996	0.002562	F2 F1	mg/Kg		2	70 - 130	182	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	2911	S1+	70 - 130
1,4-Difluorobenzene (Surr)	176	S1+	70 - 130

Lab Sample ID: MB 880-21364/5-A
Matrix: Solid
Analysis Batch: 21361

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21364

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/11/22 08:45	03/11/22 12:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	03/11/22 08:45	03/11/22 12:56	1
1,4-Difluorobenzene (Surr)	104		70 - 130	03/11/22 08:45	03/11/22 12:56	1

Lab Sample ID: LCS 880-21364/1-A
Matrix: Solid
Analysis Batch: 21361

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21364

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09733		mg/Kg		97	70 - 130		
Toluene			0.100	0.09798		mg/Kg		98	70 - 130		
Ethylbenzene			0.100	0.1017		mg/Kg		102	70 - 130		
m,p-Xylenes			0.200	0.2078		mg/Kg		104	70 - 130		
o-Xylene			0.100	0.1011		mg/Kg		101	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-21364/2-A
Matrix: Solid
Analysis Batch: 21361

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21364

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1003		mg/Kg		100	70 - 130	3	35
Toluene			0.100	0.1006		mg/Kg		101	70 - 130	3	35
Ethylbenzene			0.100	0.1023		mg/Kg		102	70 - 130	1	35
m,p-Xylenes			0.200	0.2119		mg/Kg		106	70 - 130	2	35
o-Xylene			0.100	0.1041		mg/Kg		104	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

Lab Sample ID: 880-12301-A-6-B MS
Matrix: Solid
Analysis Batch: 21361

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21364

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00200	U	0.0998	0.07999		mg/Kg		80	70 - 130		
Toluene	<0.00200	U	0.0998	0.07840		mg/Kg		77	70 - 130		
Ethylbenzene	<0.00200	U	0.0998	0.07743		mg/Kg		77	70 - 130		
m,p-Xylenes	<0.00399	U	0.200	0.1595		mg/Kg		79	70 - 130		
o-Xylene	<0.00200	U	0.0998	0.08084		mg/Kg		80	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 880-12301-A-6-C MSD
Matrix: Solid
Analysis Batch: 21361

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 21364

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.08021		mg/Kg		81	70 - 130	0	35
Toluene	<0.00200	U	0.0996	0.08055		mg/Kg		80	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0996	0.07568		mg/Kg		75	70 - 130	2	35
m,p-Xylenes	<0.00399	U	0.199	0.1542		mg/Kg		76	70 - 130	3	35
o-Xylene	<0.00200	U	0.0996	0.07417		mg/Kg		74	70 - 130	9	35

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

Lab Sample ID: MB 880-21365/5-A
Matrix: Solid
Analysis Batch: 21366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21365

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-21365/5-A
Matrix: Solid
Analysis Batch: 21366

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21365

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/11/22 08:50	03/11/22 12:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*03/11/22 08:50*	*03/11/22 12:40*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*03/11/22 08:50*	*03/11/22 12:40*	*1*

Lab Sample ID: LCS 880-21365/1-A
Matrix: Solid
Analysis Batch: 21366

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21365

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09712		mg/Kg		97	70 - 130		
Toluene			0.100	0.09327		mg/Kg		93	70 - 130		
Ethylbenzene			0.100	0.09429		mg/Kg		94	70 - 130		
m,p-Xylenes			0.200	0.2190		mg/Kg		109	70 - 130		
o-Xylene			0.100	0.1061		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-21365/2-A
Matrix: Solid
Analysis Batch: 21366

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21365

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09481		mg/Kg		95	70 - 130	2	35
Toluene			0.100	0.09272		mg/Kg		93	70 - 130	1	35
Ethylbenzene			0.100	0.09409		mg/Kg		94	70 - 130	0	35
m,p-Xylenes			0.200	0.2206		mg/Kg		110	70 - 130	1	35
o-Xylene			0.100	0.1082		mg/Kg		108	70 - 130	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: 880-12254-A-1-E MS
Matrix: Solid
Analysis Batch: 21366

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U	0.0998	0.08929		mg/Kg		89	70 - 130		
Toluene	<0.00199	U F1	0.0998	0.07024		mg/Kg		70	70 - 130		
Ethylbenzene	<0.00199	U F1	0.0998	0.05491	F1	mg/Kg		54	70 - 130		
m,p-Xylenes	<0.00398	U F1	0.200	0.09500	F1	mg/Kg		48	70 - 130		
o-Xylene	<0.00199	U F1	0.0998	0.06803	F1	mg/Kg		68	70 - 130		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 880-12254-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 21366 — **Prep Batch: 21365**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.07551		mg/Kg		76	70 - 130	17	35
Toluene	<0.00199	U F1	0.0996	0.05814	F1	mg/Kg		58	70 - 130	19	35
Ethylbenzene	<0.00199	U F1	0.0996	0.04339	F1	mg/Kg		43	70 - 130	23	35
m,p-Xylenes	<0.00398	U F1	0.199	0.07847	F1	mg/Kg		39	70 - 130	19	35
o-Xylene	<0.00199	U F1	0.0996	0.05406	F1	mg/Kg		54	70 - 130	23	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

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

Lab Sample ID: MB 880-21111/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 21120 — **Prep Batch: 21111**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/08/22 21:10	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/08/22 21:10	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:38	03/08/22 21:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	109		70 - 130	03/08/22 08:38	03/08/22 21:10	1
o-Terphenyl (Surr)	115		70 - 130	03/08/22 08:38	03/08/22 21:10	1

Lab Sample ID: LCS 880-21111/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 21120 — **Prep Batch: 21111**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	809.6		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1347	*+	mg/Kg		135	70 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	125		70 - 130
o-Terphenyl (Surr)	142	S1+	70 - 130

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-21111/3-A
Matrix: Solid
Analysis Batch: 21120

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21111

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	813.6		mg/Kg		81	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	1330	*+	mg/Kg		133	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*122*		*70 - 130*
o-Terphenyl (Surr)	*141*	*S1+*	*70 - 130*

Lab Sample ID: 880-12068-A-1-C MS
Matrix: Solid
Analysis Batch: 21120

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21111

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	998	910.0		mg/Kg		91	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U *+	998	918.3		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*102*		*70 - 130*
o-Terphenyl (Surr)	*94*		*70 - 130*

Lab Sample ID: 880-12068-A-1-D MSD
Matrix: Solid
Analysis Batch: 21120

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 21111

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U F2	998	1152	F2	mg/Kg		115	70 - 130	23	20
Diesel Range Organics (Over C10-C28)	<49.8	U *+	998	1064		mg/Kg		105	70 - 130	15	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*116*		*70 - 130*
o-Terphenyl (Surr)	*108*		*70 - 130*

Lab Sample ID: MB 880-21112/1-A
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21112

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/08/22 22:17	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/08/22 22:17	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 08:46	03/08/22 22:17	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-21112/1-A
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21112

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	137	S1+	70 - 130	03/08/22 08:46	03/08/22 22:17	1
o-Terphenyl (Surr)	139	S1+	70 - 130	03/08/22 08:46	03/08/22 22:17	1

Lab Sample ID: LCS 880-21112/2-A
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	840.9		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	1000	908.4		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane (Surr)	102		70 - 130
o-Terphenyl (Surr)	89		70 - 130

Lab Sample ID: LCSD 880-21112/3-A
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21112

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	824.5		mg/Kg		82	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	915.1		mg/Kg		92	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	106		70 - 130
o-Terphenyl (Surr)	93		70 - 130

Lab Sample ID: 880-12075-A-21-B MS
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21112

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1151		mg/Kg		113	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1134		mg/Kg		110	70 - 130

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

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: 880-12075-A-21-C MSD
Matrix: Solid
Analysis Batch: 21117

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 21112

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	1243		mg/Kg		122	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	1186		mg/Kg		115	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*110*		*70 - 130*
o-Terphenyl (Surr)	*89*		*70 - 130*

Lab Sample ID: MB 880-21150/1-A
Matrix: Solid
Analysis Batch: 21427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21150

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 12:38	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 12:38	1
Oll Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/08/22 13:23	03/12/22 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*95*		*70 - 130*	*03/08/22 13:23*	*03/12/22 12:38*	*1*
o-Terphenyl (Surr)	*103*		*70 - 130*	*03/08/22 13:23*	*03/12/22 12:38*	*1*

Lab Sample ID: LCS 880-21150/2-A
Matrix: Solid
Analysis Batch: 21427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21150

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	808.0		mg/Kg		81	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	989.0		mg/Kg		99	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*111*		*70 - 130*
o-Terphenyl (Surr)	*109*		*70 - 130*

Lab Sample ID: LCSD 880-21150/3-A
Matrix: Solid
Analysis Batch: 21427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21150

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	806.5		mg/Kg		81	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	947.7		mg/Kg		95	70 - 130	4	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Lab Sample ID: LCSD 880-21150/3-A
Matrix: Solid
Analysis Batch: 21427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 21150

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane (Surr)	102		70 - 130
o-Terphenyl (Surr)	100		70 - 130

Lab Sample ID: 880-12069-1 MS
Matrix: Solid
Analysis Batch: 21427

Client Sample ID: SW-24 0-4.1'
Prep Type: Total/NA
Prep Batch: 21150

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	1192		mg/Kg		118	70 - 130
Diesel Range Organics (Over C10-C28)	<49.8	U	998	1234		mg/Kg		124	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane (Surr)	112		70 - 130
o-Terphenyl (Surr)	101		70 - 130

Lab Sample ID: 880-12069-1 MSD
Matrix: Solid
Analysis Batch: 21427

Client Sample ID: SW-24 0-4.1'
Prep Type: Total/NA
Prep Batch: 21150

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	1243		mg/Kg		123	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	<49.8	U	998	1218		mg/Kg		122	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane (Surr)	113		70 - 130
o-Terphenyl (Surr)	100		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-21032/1-A
Matrix: Solid
Analysis Batch: 21201

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/10/22 11:07	1

Lab Sample ID: LCS 880-21032/2-A
Matrix: Solid
Analysis Batch: 21201

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	253.0		mg/Kg		101	90 - 110

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-21032/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21201

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	261.7		mg/Kg		105	90 - 110	3	20

Lab Sample ID: 880-12068-A-2-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21201

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<4.95	U	248	246.7		mg/Kg		100	90 - 110		

Lab Sample ID: 880-12068-A-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21201

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<4.95	U	248	249.2		mg/Kg		101	90 - 110	1	20

Lab Sample ID: MB 880-21033/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21203

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/11/22 21:26	1

Lab Sample ID: LCS 880-21033/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21203

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	265.9		mg/Kg		106	90 - 110		

Lab Sample ID: LCSD 880-21033/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21203

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	271.2		mg/Kg		108	90 - 110	2	20

Lab Sample ID: 880-12069-8 MS — **Client Sample ID: B-126 4.1'**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	705		250	932.2		mg/Kg		91	90 - 110		

Lab Sample ID: 880-12069-8 MSD — **Client Sample ID: B-126 4.1'**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 21203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	705		250	954.0		mg/Kg		99	90 - 110	2	20

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-12069-18 MS
Matrix: Solid
Analysis Batch: 21203

Client Sample ID: B-136
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1230		1250	2466		mg/Kg		99	90 - 110

Lab Sample ID: 880-12069-18 MSD
Matrix: Solid
Analysis Batch: 21203

Client Sample ID: B-136
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1230		1250	2467		mg/Kg		99	90 - 110	0	20

Lab Sample ID: MB 880-21596/1-A
Matrix: Solid
Analysis Batch: 21657

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/15/22 20:12	1

Lab Sample ID: LCS 880-21596/2-A
Matrix: Solid
Analysis Batch: 21657

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			250	238.7		mg/Kg		95	90 - 110

Lab Sample ID: LCSD 880-21596/3-A
Matrix: Solid
Analysis Batch: 21657

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	238.9		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 880-12274-A-15-F MS
Matrix: Solid
Analysis Batch: 21657

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8940		2490	11590		mg/Kg		107	90 - 110

Lab Sample ID: 880-12274-A-15-G MSD
Matrix: Solid
Analysis Batch: 21657

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8940		2490	11570		mg/Kg		106	90 - 110	0	20

Lab Sample ID: 880-12274-A-25-E MS
Matrix: Solid
Analysis Batch: 21657

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.00	U	250	241.4		mg/Kg		95	90 - 110

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 880-12274-A-25-F MSD
Matrix: Solid
Analysis Batch: 21657

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00	U	250	235.5		mg/Kg		93	90 - 110	2	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

GC VOA

Prep Batch: 21011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Total/NA	Solid	5035	
880-12069-2	SW-11 0-4.1'	Total/NA	Solid	5035	
880-12069-3	B-121 4.1'	Total/NA	Solid	5035	
880-12069-4	B-122 4.1'	Total/NA	Solid	5035	
880-12069-5	B-123 4.1'	Total/NA	Solid	5035	
880-12069-6	B-124 4.1'	Total/NA	Solid	5035	
880-12069-7	B125- 4.1'	Total/NA	Solid	5035	
880-12069-8	B-126 4.1'	Total/NA	Solid	5035	
880-12069-11	B-129 4.1'	Total/NA	Solid	5035	
880-12069-12	B-130 4.1'	Total/NA	Solid	5035	
880-12069-13	B-131 4.1'	Total/NA	Solid	5035	
880-12069-16	B-134	Total/NA	Solid	5035	
880-12069-17	B-135	Total/NA	Solid	5035	
880-12069-19	B-137	Total/NA	Solid	5035	
880-12069-20	B-138	Total/NA	Solid	5035	
MB 880-21011/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21011/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21011/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12069-1 MS	SW-24 0-4.1'	Total/NA	Solid	5035	
880-12069-1 MSD	SW-24 0-4.1'	Total/NA	Solid	5035	

Prep Batch: 21012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-21012/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 21146

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-9	B-127 4.1'	Total/NA	Solid	5035	
880-12069-10	B-128 4.1'	Total/NA	Solid	5035	
880-12069-18	B-136	Total/NA	Solid	5035	
MB 880-21146/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21146/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21146/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12263-A-1-H MS	Matrix Spike	Total/NA	Solid	5035	
880-12263-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 21361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-21	B-139	Total/NA	Solid	8021B	21364
MB 880-21364/5-A	Method Blank	Total/NA	Solid	8021B	21364
LCS 880-21364/1-A	Lab Control Sample	Total/NA	Solid	8021B	21364
LCSD 880-21364/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21364
880-12301-A-6-B MS	Matrix Spike	Total/NA	Solid	8021B	21364
880-12301-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	21364

Prep Batch: 21364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-21	B-139	Total/NA	Solid	5035	
MB 880-21364/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21364/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21364/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

GC VOA (Continued)

Prep Batch: 21364 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-A-6-B MS	Matrix Spike	Total/NA	Solid	5035	
880-12301-A-6-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 21365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-14	B-132 4.1'	Total/NA	Solid	5035	
880-12069-15	B- 133 4.1'	Total/NA	Solid	5035	
MB 880-21365/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21365/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21365/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12254-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-12254-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 21366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-14	B-132 4.1'	Total/NA	Solid	8021B	21365
880-12069-15	B- 133 4.1'	Total/NA	Solid	8021B	21365
MB 880-21365/5-A	Method Blank	Total/NA	Solid	8021B	21365
LCS 880-21365/1-A	Lab Control Sample	Total/NA	Solid	8021B	21365
LCSD 880-21365/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21365
880-12254-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	21365
880-12254-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	21365

Analysis Batch: 21405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Total/NA	Solid	8021B	21011
880-12069-2	SW-11 0-4.1'	Total/NA	Solid	8021B	21011
880-12069-3	B-121 4.1'	Total/NA	Solid	8021B	21011
880-12069-4	B-122 4.1'	Total/NA	Solid	8021B	21011
880-12069-5	B-123 4.1'	Total/NA	Solid	8021B	21011
880-12069-6	B-124 4.1'	Total/NA	Solid	8021B	21011
880-12069-7	B125- 4.1'	Total/NA	Solid	8021B	21011
880-12069-8	B-126 4.1'	Total/NA	Solid	8021B	21011
880-12069-11	B-129 4.1'	Total/NA	Solid	8021B	21011
880-12069-12	B-130 4.1'	Total/NA	Solid	8021B	21011
880-12069-13	B-131 4.1'	Total/NA	Solid	8021B	21011
880-12069-16	B-134	Total/NA	Solid	8021B	21011
880-12069-17	B-135	Total/NA	Solid	8021B	21011
880-12069-19	B-137	Total/NA	Solid	8021B	21011
880-12069-20	B-138	Total/NA	Solid	8021B	21011
MB 880-21011/5-A	Method Blank	Total/NA	Solid	8021B	21011
LCS 880-21011/1-A	Lab Control Sample	Total/NA	Solid	8021B	21011
LCSD 880-21011/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21011
880-12069-1 MS	SW-24 0-4.1'	Total/NA	Solid	8021B	21011
880-12069-1 MSD	SW-24 0-4.1'	Total/NA	Solid	8021B	21011

Analysis Batch: 21416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Total/NA	Solid	Total BTEX	
880-12069-2	SW-11 0-4.1'	Total/NA	Solid	Total BTEX	
880-12069-3	B-121 4.1'	Total/NA	Solid	Total BTEX	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

GC VOA (Continued)

Analysis Batch: 21416 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-4	B-122 4.1'	Total/NA	Solid	Total BTEX	
880-12069-5	B-123 4.1'	Total/NA	Solid	Total BTEX	
880-12069-6	B-124 4.1'	Total/NA	Solid	Total BTEX	
880-12069-7	B125- 4.1'	Total/NA	Solid	Total BTEX	
880-12069-8	B-126 4.1'	Total/NA	Solid	Total BTEX	
880-12069-9	B-127 4.1'	Total/NA	Solid	Total BTEX	
880-12069-10	B-128 4.1'	Total/NA	Solid	Total BTEX	
880-12069-11	B-129 4.1'	Total/NA	Solid	Total BTEX	
880-12069-12	B-130 4.1'	Total/NA	Solid	Total BTEX	
880-12069-13	B-131 4.1'	Total/NA	Solid	Total BTEX	
880-12069-14	B-132 4.1'	Total/NA	Solid	Total BTEX	
880-12069-15	B- 133 4.1'	Total/NA	Solid	Total BTEX	
880-12069-16	B-134	Total/NA	Solid	Total BTEX	
880-12069-17	B-135	Total/NA	Solid	Total BTEX	
880-12069-18	B-136	Total/NA	Solid	Total BTEX	
880-12069-19	B-137	Total/NA	Solid	Total BTEX	
880-12069-20	B-138	Total/NA	Solid	Total BTEX	
880-12069-21	B-139	Total/NA	Solid	Total BTEX	

Analysis Batch: 21440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-9	B-127 4.1'	Total/NA	Solid	8021B	21146
880-12069-10	B-128 4.1'	Total/NA	Solid	8021B	21146
880-12069-18	B-136	Total/NA	Solid	8021B	21146
MB 880-21012/5-A	Method Blank	Total/NA	Solid	8021B	21012
MB 880-21146/5-A	Method Blank	Total/NA	Solid	8021B	21146
LCS 880-21146/1-A	Lab Control Sample	Total/NA	Solid	8021B	21146
LCSD 880-21146/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21146
880-12263-A-1-H MS	Matrix Spike	Total/NA	Solid	8021B	21146
880-12263-A-1-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	21146

GC Semi VOA

Prep Batch: 21111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-10	B-128 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-11	B-129 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-12	B-130 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-13	B-131 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-14	B-132 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-15	B- 133 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-16	B-134	Total/NA	Solid	8015NM Prep	
MB 880-21111/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21111/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21111/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12068-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-12068-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Prep Batch: 21112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-17	B-135	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

GC Semi VOA (Continued)

Prep Batch: 21112 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-18	B-136	Total/NA	Solid	8015NM Prep	
880-12069-19	B-137	Total/NA	Solid	8015NM Prep	
880-12069-20	B-138	Total/NA	Solid	8015NM Prep	
880-12069-21	B-139	Total/NA	Solid	8015NM Prep	
MB 880-21112/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21112/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21112/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12075-A-21-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-12075-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 21117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-17	B-135	Total/NA	Solid	8015B NM	21112
880-12069-18	B-136	Total/NA	Solid	8015B NM	21112
880-12069-19	B-137	Total/NA	Solid	8015B NM	21112
880-12069-20	B-138	Total/NA	Solid	8015B NM	21112
880-12069-21	B-139	Total/NA	Solid	8015B NM	21112
MB 880-21112/1-A	Method Blank	Total/NA	Solid	8015B NM	21112
LCS 880-21112/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21112
LCSD 880-21112/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21112
880-12075-A-21-B MS	Matrix Spike	Total/NA	Solid	8015B NM	21112
880-12075-A-21-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	21112

Analysis Batch: 21120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-10	B-128 4.1'	Total/NA	Solid	8015B NM	21111
880-12069-11	B-129 4.1'	Total/NA	Solid	8015B NM	21111
880-12069-12	B-130 4.1'	Total/NA	Solid	8015B NM	21111
880-12069-13	B-131 4.1'	Total/NA	Solid	8015B NM	21111
880-12069-14	B-132 4.1'	Total/NA	Solid	8015B NM	21111
880-12069-15	B- 133 4.1'	Total/NA	Solid	8015B NM	21111
880-12069-16	B-134	Total/NA	Solid	8015B NM	21111
MB 880-21111/1-A	Method Blank	Total/NA	Solid	8015B NM	21111
LCS 880-21111/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21111
LCSD 880-21111/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21111
880-12068-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	21111
880-12068-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	21111

Prep Batch: 21150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Total/NA	Solid	8015NM Prep	
880-12069-2	SW-11 0-4.1'	Total/NA	Solid	8015NM Prep	
880-12069-3	B-121 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-4	B-122 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-5	B-123 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-6	B-124 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-7	B125- 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-8	B-126 4.1'	Total/NA	Solid	8015NM Prep	
880-12069-9	B-127 4.1'	Total/NA	Solid	8015NM Prep	
MB 880-21150/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21150/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

GC Semi VOA (Continued)

Prep Batch: 21150 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-21150/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12069-1 MS	SW-24 0-4.1'	Total/NA	Solid	8015NM Prep	
880-12069-1 MSD	SW-24 0-4.1'	Total/NA	Solid	8015NM Prep	

Analysis Batch: 21240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Total/NA	Solid	8015 NM	
880-12069-2	SW-11 0-4.1'	Total/NA	Solid	8015 NM	
880-12069-3	B-121 4.1'	Total/NA	Solid	8015 NM	
880-12069-4	B-122 4.1'	Total/NA	Solid	8015 NM	
880-12069-5	B-123 4.1'	Total/NA	Solid	8015 NM	
880-12069-6	B-124 4.1'	Total/NA	Solid	8015 NM	
880-12069-7	B125- 4.1'	Total/NA	Solid	8015 NM	
880-12069-8	B-126 4.1'	Total/NA	Solid	8015 NM	
880-12069-9	B-127 4.1'	Total/NA	Solid	8015 NM	
880-12069-10	B-128 4.1'	Total/NA	Solid	8015 NM	
880-12069-11	B-129 4.1'	Total/NA	Solid	8015 NM	
880-12069-12	B-130 4.1'	Total/NA	Solid	8015 NM	
880-12069-13	B-131 4.1'	Total/NA	Solid	8015 NM	
880-12069-14	B-132 4.1'	Total/NA	Solid	8015 NM	
880-12069-15	B- 133 4.1'	Total/NA	Solid	8015 NM	
880-12069-16	B-134	Total/NA	Solid	8015 NM	
880-12069-17	B-135	Total/NA	Solid	8015 NM	
880-12069-18	B-136	Total/NA	Solid	8015 NM	
880-12069-19	B-137	Total/NA	Solid	8015 NM	
880-12069-20	B-138	Total/NA	Solid	8015 NM	
880-12069-21	B-139	Total/NA	Solid	8015 NM	

Analysis Batch: 21427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Total/NA	Solid	8015B NM	21150
880-12069-2	SW-11 0-4.1'	Total/NA	Solid	8015B NM	21150
880-12069-3	B-121 4.1'	Total/NA	Solid	8015B NM	21150
880-12069-4	B-122 4.1'	Total/NA	Solid	8015B NM	21150
880-12069-5	B-123 4.1'	Total/NA	Solid	8015B NM	21150
880-12069-6	B-124 4.1'	Total/NA	Solid	8015B NM	21150
880-12069-7	B125- 4.1'	Total/NA	Solid	8015B NM	21150
880-12069-8	B-126 4.1'	Total/NA	Solid	8015B NM	21150
880-12069-9	B-127 4.1'	Total/NA	Solid	8015B NM	21150
MB 880-21150/1-A	Method Blank	Total/NA	Solid	8015B NM	21150
LCS 880-21150/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21150
LCSD 880-21150/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21150
880-12069-1 MS	SW-24 0-4.1'	Total/NA	Solid	8015B NM	21150
880-12069-1 MSD	SW-24 0-4.1'	Total/NA	Solid	8015B NM	21150

HPLC/IC

Leach Batch: 21032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Soluble	Solid	DI Leach	
880-12069-2	SW-11 0-4.1'	Soluble	Solid	DI Leach	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

HPLC/IC (Continued)

Leach Batch: 21032 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-3	B-121 4.1'	Soluble	Solid	DI Leach	
880-12069-4	B-122 4.1'	Soluble	Solid	DI Leach	
880-12069-5	B-123 4.1'	Soluble	Solid	DI Leach	
880-12069-6	B-124 4.1'	Soluble	Solid	DI Leach	
880-12069-7	B125- 4.1'	Soluble	Solid	DI Leach	
MB 880-21032/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21032/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21032/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12068-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12068-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Leach Batch: 21033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-8	B-126 4.1'	Soluble	Solid	DI Leach	
880-12069-9	B-127 4.1'	Soluble	Solid	DI Leach	
880-12069-10	B-128 4.1'	Soluble	Solid	DI Leach	
880-12069-11	B-129 4.1'	Soluble	Solid	DI Leach	
880-12069-12	B-130 4.1'	Soluble	Solid	DI Leach	
880-12069-15	B- 133 4.1'	Soluble	Solid	DI Leach	
880-12069-16	B-134	Soluble	Solid	DI Leach	
880-12069-17	B-135	Soluble	Solid	DI Leach	
880-12069-18	B-136	Soluble	Solid	DI Leach	
880-12069-19	B-137	Soluble	Solid	DI Leach	
880-12069-20	B-138	Soluble	Solid	DI Leach	
880-12069-21	B-139	Soluble	Solid	DI Leach	
MB 880-21033/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21033/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21033/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12069-8 MS	B-126 4.1'	Soluble	Solid	DI Leach	
880-12069-8 MSD	B-126 4.1'	Soluble	Solid	DI Leach	
880-12069-18 MS	B-136	Soluble	Solid	DI Leach	
880-12069-18 MSD	B-136	Soluble	Solid	DI Leach	

Analysis Batch: 21201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-1	SW-24 0-4.1'	Soluble	Solid	300.0	21032
880-12069-2	SW-11 0-4.1'	Soluble	Solid	300.0	21032
880-12069-3	B-121 4.1'	Soluble	Solid	300.0	21032
880-12069-4	B-122 4.1'	Soluble	Solid	300.0	21032
880-12069-5	B-123 4.1'	Soluble	Solid	300.0	21032
880-12069-6	B-124 4.1'	Soluble	Solid	300.0	21032
880-12069-7	B125- 4.1'	Soluble	Solid	300.0	21032
MB 880-21032/1-A	Method Blank	Soluble	Solid	300.0	21032
LCS 880-21032/2-A	Lab Control Sample	Soluble	Solid	300.0	21032
LCSD 880-21032/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21032
880-12068-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	21032
880-12068-A-2-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21032

Analysis Batch: 21203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-8	B-126 4.1'	Soluble	Solid	300.0	21033

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

HPLC/IC (Continued)

Analysis Batch: 21203 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-9	B-127 4.1'	Soluble	Solid	300.0	21033
880-12069-10	B-128 4.1'	Soluble	Solid	300.0	21033
880-12069-11	B-129 4.1'	Soluble	Solid	300.0	21033
880-12069-12	B-130 4.1'	Soluble	Solid	300.0	21033
880-12069-15	B- 133 4.1'	Soluble	Solid	300.0	21033
880-12069-16	B-134	Soluble	Solid	300.0	21033
880-12069-17	B-135	Soluble	Solid	300.0	21033
880-12069-18	B-136	Soluble	Solid	300.0	21033
880-12069-19	B-137	Soluble	Solid	300.0	21033
880-12069-20	B-138	Soluble	Solid	300.0	21033
880-12069-21	B-139	Soluble	Solid	300.0	21033
MB 880-21033/1-A	Method Blank	Soluble	Solid	300.0	21033
LCS 880-21033/2-A	Lab Control Sample	Soluble	Solid	300.0	21033
LCSD 880-21033/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21033
880-12069-8 MS	B-126 4.1'	Soluble	Solid	300.0	21033
880-12069-8 MSD	B-126 4.1'	Soluble	Solid	300.0	21033
880-12069-18 MS	B-136	Soluble	Solid	300.0	21033
880-12069-18 MSD	B-136	Soluble	Solid	300.0	21033

Leach Batch: 21596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-13	B-131 4.1'	Soluble	Solid	DI Leach	
880-12069-14	B-132 4.1'	Soluble	Solid	DI Leach	
MB 880-21596/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21596/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21596/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12274-A-15-F MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12274-A-15-G MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
880-12274-A-25-E MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12274-A-25-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 21657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12069-13	B-131 4.1'	Soluble	Solid	300.0	21596
880-12069-14	B-132 4.1'	Soluble	Solid	300.0	21596
MB 880-21596/1-A	Method Blank	Soluble	Solid	300.0	21596
LCS 880-21596/2-A	Lab Control Sample	Soluble	Solid	300.0	21596
LCSD 880-21596/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21596
880-12274-A-15-F MS	Matrix Spike	Soluble	Solid	300.0	21596
880-12274-A-15-G MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21596
880-12274-A-25-E MS	Matrix Spike	Soluble	Solid	300.0	21596
880-12274-A-25-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	21596

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: SW-24 0-4.1'

Lab Sample ID: 880-12069-1
Matrix: Solid
Date Collected: 03/04/22 08:10
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 19:31	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 13:43	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21032	03/07/22 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			21201	03/10/22 15:01	CH	XEN MID

Client Sample ID: SW-11 0-4.1'

Lab Sample ID: 880-12069-2
Matrix: Solid
Date Collected: 03/04/22 08:33
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 19:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 14:47	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	21032	03/07/22 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			21201	03/10/22 15:07	CH	XEN MID

Client Sample ID: B-121 4.1'

Lab Sample ID: 880-12069-3
Matrix: Solid
Date Collected: 03/04/22 10:35
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 20:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 15:08	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	21032	03/07/22 10:58	CH	XEN MID
Soluble	Analysis	300.0		5			21201	03/10/22 15:12	CH	XEN MID

Client Sample ID: B-122 4.1'

Lab Sample ID: 880-12069-4
Matrix: Solid
Date Collected: 03/04/22 10:36
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 20:54	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-122 4.1'

Lab Sample ID: 880-12069-4
Matrix: Solid
Date Collected: 03/04/22 10:36
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 15:30	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21032	03/07/22 10:58	CH	XEN MID
Soluble	Analysis	300.0		10			21201	03/10/22 15:18	CH	XEN MID

Client Sample ID: B-123 4.1'

Lab Sample ID: 880-12069-5
Matrix: Solid
Date Collected: 03/04/22 10:37
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 21:21	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 15:51	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21032	03/07/22 10:58	CH	XEN MID
Soluble	Analysis	300.0		50			21201	03/10/22 15:24	CH	XEN MID

Client Sample ID: B-124 4.1'

Lab Sample ID: 880-12069-6
Matrix: Solid
Date Collected: 03/04/22 10:38
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 21:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 16:12	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21032	03/07/22 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			21201	03/10/22 15:30	CH	XEN MID

Client Sample ID: B125- 4.1'

Lab Sample ID: 880-12069-7
Matrix: Solid
Date Collected: 03/04/22 10:39
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 22:16	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 16:33	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B125- 4.1'
Date Collected: 03/04/22 10:39
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5 g	50 mL	21032	03/07/22 10:58	CH	XEN MID
Soluble	Analysis	300.0		1			21201	03/10/22 15:36	CH	XEN MID

Client Sample ID: B-126 4.1'
Date Collected: 03/04/22 10:40
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/12/22 22:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 16:54	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		1			21203	03/11/22 21:44	CH	XEN MID

Client Sample ID: B-127 4.1'
Date Collected: 03/04/22 10:41
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21146	03/13/22 12:58	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21440	03/14/22 00:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21150	03/08/22 13:23	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21427	03/12/22 17:14	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		1			21203	03/11/22 22:02	CH	XEN MID

Client Sample ID: B-128 4.1'
Date Collected: 03/04/22 10:42
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21146	03/13/22 12:58	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21440	03/14/22 00:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21111	03/08/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21120	03/09/22 03:56	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		1			21203	03/11/22 22:07	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-129 4.1'

Date Collected: 03/04/22 10:43
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 01:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	21111	03/08/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21120	03/09/22 04:17	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		10			21203	03/11/22 22:13	CH	XEN MID

Client Sample ID: B-130 4.1'

Date Collected: 03/04/22 10:44
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 01:52	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21111	03/08/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21120	03/09/22 04:38	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		10			21203	03/11/22 22:19	CH	XEN MID

Client Sample ID: B-131 4.1'

Date Collected: 03/04/22 10:45
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 03:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21111	03/08/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21120	03/09/22 05:00	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21596	03/15/22 08:22	CH	XEN MID
Soluble	Analysis	300.0		10			21657	03/16/22 18:25	CH	XEN MID

Client Sample ID: B-132 4.1'

Date Collected: 03/04/22 10:46
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	21365	03/11/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21366	03/11/22 20:06	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-132 4.1'

Lab Sample ID: 880-12069-14
Matrix: Solid
Date Collected: 03/04/22 10:46
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21111	03/08/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21120	03/09/22 05:22	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	21596	03/15/22 08:22	CH	XEN MID
Soluble	Analysis	300.0		5			21657	03/16/22 00:29	CH	XEN MID

Client Sample ID: B- 133 4.1'

Lab Sample ID: 880-12069-15
Matrix: Solid
Date Collected: 03/04/22 10:47
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21365	03/11/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21366	03/11/22 20:26	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21111	03/08/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21120	03/09/22 05:42	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		10			21203	03/11/22 22:49	CH	XEN MID

Client Sample ID: B-134

Lab Sample ID: 880-12069-16
Matrix: Solid
Date Collected: 03/04/22 10:48
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 03:46	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21111	03/08/22 08:38	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21120	03/09/22 06:04	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		5			21203	03/11/22 22:55	CH	XEN MID

Client Sample ID: B-135

Lab Sample ID: 880-12069-17
Matrix: Solid
Date Collected: 03/04/22 10:49
Date Received: 03/04/22 15:54

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 04:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/09/22 01:40	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-135
Date Collected: 03/04/22 10:49
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		10			21203	03/11/22 23:00	CH	XEN MID

Client Sample ID: B-136
Date Collected: 03/04/22 10:50
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	21146	03/13/22 12:58	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21440	03/14/22 01:05	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/09/22 02:03	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		5			21203	03/11/22 23:06	CH	XEN MID

Client Sample ID: B-137
Date Collected: 03/04/22 10:51
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 05:07	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/09/22 02:25	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		1			21203	03/11/22 23:24	CH	XEN MID

Client Sample ID: B-138
Date Collected: 03/04/22 10:52
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	21011	03/10/22 09:50	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21405	03/13/22 05:33	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/09/22 02:48	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		1			21203	03/11/22 23:30	CH	XEN MID

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Client Sample ID: B-139

Date Collected: 03/04/22 10:53
Date Received: 03/04/22 15:54

Lab Sample ID: 880-12069-21

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21361	03/11/22 15:01	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21416	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21240	03/09/22 18:43	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21112	03/08/22 08:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21117	03/09/22 03:10	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	21033	03/07/22 11:03	CH	XEN MID
Soluble	Analysis	300.0		1			21203	03/11/22 23:47	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc. Job ID: 880-12069-1
Project/Site: Mack PW Release SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-12069-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-12069-1	SW-24 0-4.1'	Solid	03/04/22 08:10	03/04/22 15:54
880-12069-2	SW-11 0-4.1'	Solid	03/04/22 08:33	03/04/22 15:54
880-12069-3	B-121 4.1'	Solid	03/04/22 10:35	03/04/22 15:54
880-12069-4	B-122 4.1'	Solid	03/04/22 10:36	03/04/22 15:54
880-12069-5	B-123 4.1'	Solid	03/04/22 10:37	03/04/22 15:54
880-12069-6	B-124 4.1'	Solid	03/04/22 10:38	03/04/22 15:54
880-12069-7	B125- 4.1'	Solid	03/04/22 10:39	03/04/22 15:54
880-12069-8	B-126 4.1'	Solid	03/04/22 10:40	03/04/22 15:54
880-12069-9	B-127 4.1'	Solid	03/04/22 10:41	03/04/22 15:54
880-12069-10	B-128 4.1'	Solid	03/04/22 10:42	03/04/22 15:54
880-12069-11	B-129 4.1'	Solid	03/04/22 10:43	03/04/22 15:54
880-12069-12	B-130 4.1'	Solid	03/04/22 10:44	03/04/22 15:54
880-12069-13	B-131 4.1'	Solid	03/04/22 10:45	03/04/22 15:54
880-12069-14	B-132 4.1'	Solid	03/04/22 10:46	03/04/22 15:54
880-12069-15	B- 133 4.1'	Solid	03/04/22 10:47	03/04/22 15:54
880-12069-16	B-134	Solid	03/04/22 10:48	03/04/22 15:54
880-12069-17	B-135	Solid	03/04/22 10:49	03/04/22 15:54
880-12069-18	B-136	Solid	03/04/22 10:50	03/04/22 15:54
880-12069-19	B-137	Solid	03/04/22 10:51	03/04/22 15:54
880-12069-20	B-138	Solid	03/04/22 10:52	03/04/22 15:54
880-12069-21	B-139	Solid	03/04/22 10:53	03/04/22 15:54

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No. 2477

12069 CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld, Ste 202
Midland, TX 79701
432-687-0901

Data Reported to

DATE: 3/4/2022 PAGE 1 OF 2

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE
Time zone/State: MST / NM

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐	8082 PCBS ☐	8151 HERBICIDES ☐	TCLP - METALS (RCRA) ☐	TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D W 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
SW-24 0-4'		3/4/22	0810	S	1				X		X		X	X	X																X		
SW-11 0-4'			0833																														
B-121 4.1'			1035																														
B-122 4.1'			1036																														
B-123 4.1'			1037																														
B-124 4.1'			1038																														
B-125 4.1'			1039																														
B-126 4.1'			1040																														
B-127 4.1'			1041																														
B-128 4.1'			1042																														
B-129 4.1'			1043																														
B-130 4.1'			1044																														
B-131 4.1'			1045																														
B-132 4.1'			1646																														
B-133 4.1			1047																														

TOTAL 15

880-12069 Chain of Custody

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
[signature]	3/4/22 15:31	[signature]
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
LABORATORY XENCO		

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 5.2/5.1 THERM# -1 IR6
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

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Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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No. 2478

n2069

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld, Ste 202
Midland, TX 79701
432-687-0901

DATE: 3/4/2022 PAGE 2 OF 2

PO#: LAB WORK ORDER#:

PROJECT LOCATION OR NAME: MACK PW RELEASE

LAI PROJECT # 21-0105-04 COLLECTOR: BSG

Data Reported to

TRRP report? ☐ Yes ☑ No

TIME ZONE Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☑ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☑	DIESEL - MOD 8015 ☑	OIL - MOD 8015 ☑	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D W 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☑ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-134		3/4/21	1048	S	1				X		X		X	X	X															X	
B-135			1049																												
B-136			1050																												
B-137			1051																												
B-138			1052																												
B-139			1053																												

TOTAL 6

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
DSG	3/4/2022 15:54	
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY XENCO

TURN AROUND TIME
NORMAL ☑
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 5.2/5.1 THERM# -1 IR9
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

Page 55 of 56

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-12069-1
SDG Number: 21-0105-04

Login Number: 12069
List Number: 1
Creator: Rodriguez, Leticia

List Source: Eurofins Midland

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

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW

Project Number: 21-0105-04

Location: NM

Lab Order Number: 2C24008

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 03/25/22

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-123 @ 5'	2C24008-01	Soil	03/24/22 12:00	03-24-2022 16:42

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

B-123 @ 5'

2C24008-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00108	mg/kg dry	1	P2C2402	03/24/22 16:38	03/25/22 07:12	EPA 8021B	
Toluene	ND	0.00108	mg/kg dry	1	P2C2402	03/24/22 16:38	03/25/22 07:12	EPA 8021B	
Ethylbenzene	ND	0.00108	mg/kg dry	1	P2C2402	03/24/22 16:38	03/25/22 07:12	EPA 8021B	
Xylene (p/m)	ND	0.00215	mg/kg dry	1	P2C2402	03/24/22 16:38	03/25/22 07:12	EPA 8021B	
Xylene (o)	ND	0.00108	mg/kg dry	1	P2C2402	03/24/22 16:38	03/25/22 07:12	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*		*P2C2402*	*03/24/22 16:38*	*03/25/22 07:12*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*103 %*	*80-120*		*P2C2402*	*03/24/22 16:38*	*03/25/22 07:12*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**6080**	26.9	mg/kg dry	25	P2C2503	03/25/22 08:07	03/25/22 09:52	EPA 300.0	
% Moisture	**7.0**	0.1	%	1	P2C2510	03/25/22 13:45	03/25/22 13:47	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.9	mg/kg dry	1	P2C2501	03/25/22 08:00	03/25/22 09:56	TPH 8015M	
>C12-C28	ND	26.9	mg/kg dry	1	P2C2501	03/25/22 08:00	03/25/22 09:56	TPH 8015M	
>C28-C35	ND	26.9	mg/kg dry	1	P2C2501	03/25/22 08:00	03/25/22 09:56	TPH 8015M	
Surrogate: 1-Chlorooctane		*99.1 %*	*70-130*		*P2C2501*	*03/25/22 08:00*	*03/25/22 09:56*	*TPH 8015M*	
Surrogate: o-Terphenyl		*108 %*	*70-130*		*P2C2501*	*03/25/22 08:00*	*03/25/22 09:56*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.9	mg/kg dry	1	[CALC]	03/25/22 08:00	03/25/22 09:56	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P2C2402 - General Preparation (GC)										
Blank (P2C2402-BLK1)				Prepared & Analyzed: 03/24/22						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.122*		"	*0.120*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.119*		"	*0.120*		*99.4*	*80-120*			
LCS (P2C2402-BS1)				Prepared & Analyzed: 03/24/22						
Benzene	0.108	0.00100	mg/kg wet	0.100		108	80-120			
Toluene	0.103	0.00100	"	0.100		103	80-120			
Ethylbenzene	0.117	0.00100	"	0.100		117	80-120			
Xylene (p/m)	0.219	0.00200	"	0.200		109	80-120			
Xylene (o)	0.103	0.00100	"	0.100		103	80-120			
Surrogate: 4-Bromofluorobenzene	*0.124*		"	*0.120*		*103*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.124*		"	*0.120*		*103*	*80-120*			
LCS Dup (P2C2402-BSD1)				Prepared & Analyzed: 03/24/22						
Benzene	0.111	0.00100	mg/kg wet	0.100		111	80-120	2.92	20	
Toluene	0.107	0.00100	"	0.100		107	80-120	3.77	20	
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120	1.39	20	
Xylene (p/m)	0.229	0.00200	"	0.200		115	80-120	4.70	20	
Xylene (o)	0.107	0.00100	"	0.100		107	80-120	4.33	20	
Surrogate: 1,4-Difluorobenzene	*0.125*		"	*0.120*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.125*		"	*0.120*		*104*	*80-120*			
Calibration Blank (P2C2402-CCB1)				Prepared & Analyzed: 03/24/22						
Benzene	0.130		mg/kg wet							
Toluene	0.180		"							
Ethylbenzene	0.130		"							
Xylene (p/m)	0.320		"							
Xylene (o)	0.160		"							
Surrogate: 1,4-Difluorobenzene	*0.123*		"	*0.120*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.117*		"	*0.120*		*97.9*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P2C2402 - General Preparation (GC)										
Calibration Blank (P2C2402-CCB2)				Prepared: 03/24/22 Analyzed: 03/25/22						
Benzene	0.100		mg/kg wet							
Toluene	0.200		"							
Ethylbenzene	0.00		"							
Xylene (p/m)	0.370		"							
Xylene (o)	0.270		"							
Surrogate: 1,4-Difluorobenzene	*0.123*		*"*	*0.120*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.114*		*"*	*0.120*		*94.8*	*80-120*			
Calibration Check (P2C2402-CCV1)				Prepared & Analyzed: 03/24/22						
Benzene	0.119	0.00100	mg/kg wet	0.100		119	80-120			
Toluene	0.114	0.00100	"	0.100		114	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		119	80-120			
Xylene (o)	0.115	0.00100	"	0.100		115	80-120			
Surrogate: 1,4-Difluorobenzene	*0.122*		*"*	*0.120*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.118*		*"*	*0.120*		*97.9*	*75-125*			
Calibration Check (P2C2402-CCV2)				Prepared: 03/24/22 Analyzed: 03/25/22						
Benzene	0.117	0.00100	mg/kg wet	0.100		117	80-120			
Toluene	0.113	0.00100	"	0.100		113	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.237	0.00200	"	0.200		119	80-120			
Xylene (o)	0.115	0.00100	"	0.100		115	80-120			
Surrogate: 4-Bromofluorobenzene	*0.117*		*"*	*0.120*		*97.8*	*75-125*			
Surrogate: 1,4-Difluorobenzene	*0.119*		*"*	*0.120*		*99.4*	*75-125*			
Calibration Check (P2C2402-CCV3)				Prepared: 03/24/22 Analyzed: 03/25/22						
Benzene	0.120	0.00100	mg/kg wet	0.100		120	80-120			
Toluene	0.120	0.00100	"	0.100		120	80-120			
Ethylbenzene	0.119	0.00100	"	0.100		119	80-120			
Xylene (p/m)	0.239	0.00200	"	0.200		120	80-120			
Xylene (o)	0.119	0.00100	"	0.100		119	80-120			
Surrogate: 1,4-Difluorobenzene	*0.122*		*"*	*0.120*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.121*		*"*	*0.120*		*100*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P2C2402 - General Preparation (GC)										
Matrix Spike (P2C2402-MS1)		**Source: 2C21006-25**		Prepared: 03/24/22 Analyzed: 03/25/22						
Benzene	0.102	0.00106	mg/kg dry	0.106	ND	95.6	80-120			
Toluene	0.0796	0.00106	"	0.106	ND	74.8	80-120			QM-05
Ethylbenzene	0.0690	0.00106	"	0.106	ND	64.8	80-120			QM-05
Xylene (p/m)	0.108	0.00213	"	0.213	0.00248	49.6	80-120			QM-05
Xylene (o)	0.0594	0.00106	"	0.106	0.00106	54.9	80-120			QM-05
Surrogate: 1,4-Difluorobenzene	*0.136*		*"*	*0.128*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.128*		*"*	*0.128*		*100*	*80-120*			
Matrix Spike Dup (P2C2402-MSD1)		**Source: 2C21006-25**		Prepared: 03/24/22 Analyzed: 03/25/22						
Benzene	0.102	0.00106	mg/kg dry	0.106	ND	95.6	80-120	0.0104	20	
Toluene	0.0810	0.00106	"	0.106	ND	76.2	80-120	1.79	20	QM-05
Ethylbenzene	0.0698	0.00106	"	0.106	ND	65.6	80-120	1.21	20	QM-05
Xylene (p/m)	0.108	0.00213	"	0.213	0.00248	49.4	80-120	0.323	20	QM-05
Xylene (o)	0.0605	0.00106	"	0.106	0.00106	55.8	80-120	1.75	20	QM-05
Surrogate: 1,4-Difluorobenzene	*0.137*		*"*	*0.128*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.127*		*"*	*0.128*		*99.4*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P2C2503 - * DEFAULT PREP *** **										
Blank (P2C2503-BLK1)				Prepared & Analyzed: 03/25/22						
Chloride	ND	1.00	mg/kg wet							
LCS (P2C2503-BS1)				Prepared & Analyzed: 03/25/22						
Chloride	42.0		mg/kg	40.0		105	90-110			
LCS Dup (P2C2503-BSD1)				Prepared & Analyzed: 03/25/22						
Chloride	42.0		mg/kg	40.0		105	90-110	0.0619	10	
Calibration Blank (P2C2503-CCB1)				Prepared & Analyzed: 03/25/22						
Chloride	0.0360		mg/kg wet							
Calibration Check (P2C2503-CCV1)				Prepared & Analyzed: 03/25/22						
Chloride	20.8		mg/kg	20.0		104	90-110			
Matrix Spike (P2C2503-MS1)		**Source: 2C24008-01**		Prepared & Analyzed: 03/25/22						
Chloride	7480	26.9	mg/kg dry	1340	6080	104	80-120			
Matrix Spike Dup (P2C2503-MSD1)		**Source: 2C24008-01**		Prepared & Analyzed: 03/25/22						
Chloride	7480	26.9	mg/kg dry	1340	6080	104	80-120	0.00359	20	
Batch P2C2510 - * DEFAULT PREP *** **										
Blank (P2C2510-BLK1)				Prepared & Analyzed: 03/25/22						
% Moisture	ND	0.1	%							
Blank (P2C2510-BLK2)				Prepared & Analyzed: 03/25/22						
% Moisture	ND	0.1	%							

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P2C2510 - * DEFAULT PREP *** **										
Duplicate (P2C2510-DUP1)		**Source: 2C25001-09**		Prepared & Analyzed: 03/25/22						
% Moisture	4.0	0.1	%		4.0			0.00	20	
Duplicate (P2C2510-DUP2)		**Source: 2C25001-19**		Prepared & Analyzed: 03/25/22						
% Moisture	4.0	0.1	%		4.0			0.00	20	
Duplicate (P2C2510-DUP3)		**Source: 2C25005-04**		Prepared & Analyzed: 03/25/22						
% Moisture	1.0	0.1	%		1.0			0.00	20	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P2C2501 - * DEFAULT PREP *** **										
Blank (P2C2501-BLK1)				Prepared & Analyzed: 03/25/22						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*102*		*"*	*100*		*102*	*70-130*			
Surrogate: o-Terphenyl	*55.9*		*"*	*50.0*		*112*	*70-130*			
LCS (P2C2501-BS1)				Prepared & Analyzed: 03/25/22						
C6-C12	925	25.0	mg/kg wet	1000		92.5	75-125			
>C12-C28	914	25.0	"	1000		91.4	75-125			
Surrogate: 1-Chlorooctane	*124*		*"*	*100*		*124*	*70-130*			
Surrogate: o-Terphenyl	*60.5*		*"*	*50.0*		*121*	*70-130*			
LCS Dup (P2C2501-BSD1)				Prepared & Analyzed: 03/25/22						
C6-C12	988	25.0	mg/kg wet	1000		98.8	75-125	6.56	20	
>C12-C28	974	25.0	"	1000		97.4	75-125	6.38	20	
Surrogate: 1-Chlorooctane	*113*		*"*	*100*		*113*	*70-130*			
Surrogate: o-Terphenyl	*60.1*		*"*	*50.0*		*120*	*70-130*			
Calibration Check (P2C2501-CCV1)				Prepared & Analyzed: 03/25/22						
C6-C12	506	25.0	mg/kg wet	500		101	85-115			
>C12-C28	459	25.0	"	500		91.8	85-115			
Surrogate: 1-Chlorooctane	*123*		*"*	*100*		*123*	*70-130*			
Surrogate: o-Terphenyl	*59.0*		*"*	*50.0*		*118*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

ROI	Received on Ice
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
NPBEL C(	Chain of Custody was not generated at PBELAB
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 3/25/2022

Brent Barron, Laboratory Director/Technical Director

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-686-7235.

Larson & Associates, Inc.	Project:	Mack PW
P.O. Box 50685	Project Number:	21-0105-04
Midland TX, 79710	Project Manager:	Mark Larson

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

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№ 1917

CHAIN-OF-CUSTOD

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 3/24/2022 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 2C24008

PROJECT LOCATION OR NAME: MACK PW

LAI PROJECT #: 21-0105-04 COLLECTOR: DSG

Data Reported to:

TRRP report? ☐ Yes ☒ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE: Time zone/State: MNT / NM

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ☐ NaOH ☐	ICE	UNPRESSERVED	ANALYSES: BTEX ☒ MTBE ☐	TRPH 418.1 ☐	TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☒	DIESEL - MOD 8015 ☒	OIL - MOD 8015 ☒	VOC 8260 ☐	SVOC 8270 ☐	PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☐ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDES ☒ ANIONS ☐ ALKALINITY ☐	FIELD NOTES
B-123 5'		3/24/22	1200	S	1				X		X		X	X	X														X		

Page 769 of 904

PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

Sample Receipt Checklist

Yes		Notes
✓	Chain of custody present?	
	Chain of custody signed/dated/time when relinquished and received?	
✓	Samples arrived present on COC for all samples?	
	Samplers name present on COC?	
✓	Chain of custody agrees with sample labels?	
	Sample containers intact?	
X	Custody seals intact on sample bottles?	
✓	Samples in proper container/bottle?	
✓	Sufficient sample volume for indicated test?	
	All samples received within holding time?	
X	Samples received with appropriate temp?	11.7
✓	Analysis requested for all samples submitted?	
✓	Proper container/cooler ice/temp conditions?	
	Custody seals intact on shipping container/cooler?	

Login Notes:
2DZ 2C24008

PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

SAMPLE VARIANCE/NON-CONFORMANCE

Variance/Discrepancy:
temp 11.7 SOF on ice

Resolution:

Client Contacted NO
Name:
Date/Time:

NC Initiated by: TB Approved by:

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

Backfill Composite Samples

PERMIAN BASIN
ENVIRONMENTAL LAB, LP
1400 Rankin Hwy
Midland, TX 79701

PBELAB

Analytical Report

Prepared for:

Mark Larson

Larson & Associates, Inc.

P.O. Box 50685

Midland, TX 79710

Project: Mack PW

Project Number: 21-0105-04

Location: NM

Lab Order Number: 1L07004

NELAP ACCREDITED TNI LABORATORY

Current Certification

Report Date: 12/20/21

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BF-1	1L07004-01	Soil	12/06/21 11:30	12-07-2021 10:23
BF-2	1L07004-02	Soil	12/06/21 11:31	12-07-2021 10:23
BF-3	1L07004-03	Soil	12/06/21 11:32	12-07-2021 10:23
BF-4	1L07004-04	Soil	12/06/21 11:33	12-07-2021 10:23
BF-5	1L07004-05	Soil	12/06/21 11:34	12-07-2021 10:23
BF-6	1L07004-06	Soil	12/06/21 11:35	12-07-2021 10:23
BF-7	1L07004-07	Soil	12/06/21 11:36	12-07-2021 10:23
BF-8	1L07004-08	Soil	12/06/21 11:37	12-07-2021 10:23
BF-9	1L07004-09	Soil	12/06/21 11:38	12-07-2021 10:23

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-1

1L07004-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Permian Basin Environmental Lab, L.P.									
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 14:57	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 14:57	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 14:57	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 14:57	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 14:57	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*99.3 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 14:57*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*99.5 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 14:57*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**12.8**	1.04	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 14:43	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1L0815	12/08/21 15:15	12/08/21 23:58	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1L0815	12/08/21 15:15	12/08/21 23:58	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1L0815	12/08/21 15:15	12/08/21 23:58	TPH 8015M	
Surrogate: 1-Chlorooctane		*71.8 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/08/21 23:58*	*TPH 8015M*	
Surrogate: o-Terphenyl		*80.9 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/08/21 23:58*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	12/08/21 15:15	12/08/21 23:58	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-2

1L07004-02 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:18	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:18	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:18	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:18	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:18	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.9 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 15:18*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 15:18*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**146**	1.05	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 14:58	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 00:21	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 00:21	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 00:21	TPH 8015M	
Surrogate: 1-Chlorooctane		*82.2 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 00:21*	*TPH 8015M*	
Surrogate: o-Terphenyl		*92.5 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 00:21*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	12/08/21 15:15	12/09/21 00:21	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-3

1L07004-03 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:39	EPA 8021B	
Toluene	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:39	EPA 8021B	
Ethylbenzene	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:39	EPA 8021B	
Xylene (p/m)	ND	0.00208	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:39	EPA 8021B	
Xylene (o)	ND	0.00104	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 15:39	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*99.6 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 15:39*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*98.8 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 15:39*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**40.2**	1.04	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 15:13	EPA 300.0	
% Moisture	**4.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.0	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 00:44	TPH 8015M	
>C12-C28	ND	26.0	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 00:44	TPH 8015M	
>C28-C35	ND	26.0	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 00:44	TPH 8015M	
Surrogate: 1-Chlorooctane		*80.9 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 00:44*	*TPH 8015M*	
Surrogate: o-Terphenyl		*91.6 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 00:44*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.0	mg/kg dry	1	[CALC]	12/08/21 15:15	12/09/21 00:44	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-4

1L07004-04 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00103	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 16:43	EPA 8021B	
Toluene	ND	0.00103	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 16:43	EPA 8021B	
Ethylbenzene	ND	0.00103	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 16:43	EPA 8021B	
Xylene (p/m)	ND	0.00206	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 16:43	EPA 8021B	
Xylene (o)	ND	0.00103	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 16:43	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 16:43*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 16:43*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**76.4**	1.03	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 15:28	EPA 300.0	
% Moisture	**3.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.8	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:07	TPH 8015M	
>C12-C28	ND	25.8	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:07	TPH 8015M	
>C28-C35	ND	25.8	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:07	TPH 8015M	
Surrogate: 1-Chlorooctane		*76.1 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 01:07*	*TPH 8015M*	
Surrogate: o-Terphenyl		*86.2 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 01:07*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.8	mg/kg dry	1	[CALC]	12/08/21 15:15	12/09/21 01:07	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-5

1L07004-05 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:05	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:05	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:05	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:05	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:05	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*102 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 17:05*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 17:05*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**129**	1.01	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 15:44	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:30	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:30	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:30	TPH 8015M	
Surrogate: 1-Chlorooctane		*76.3 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 01:30*	*TPH 8015M*	
Surrogate: o-Terphenyl		*80.8 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 01:30*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	12/08/21 15:15	12/09/21 01:30	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-6

1L07004-06 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:26	EPA 8021B	
Toluene	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:26	EPA 8021B	
Ethylbenzene	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:26	EPA 8021B	
Xylene (p/m)	ND	0.00211	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:26	EPA 8021B	
Xylene (o)	ND	0.00105	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:26	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 17:26*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 17:26*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**156**	1.05	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 15:59	EPA 300.0	
% Moisture	**5.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	26.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:53	TPH 8015M	
>C12-C28	ND	26.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:53	TPH 8015M	
>C28-C35	ND	26.3	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 01:53	TPH 8015M	
Surrogate: 1-Chlorooctane		*78.9 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 01:53*	*TPH 8015M*	
Surrogate: o-Terphenyl		*89.9 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 01:53*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	26.3	mg/kg dry	1	[CALC]	12/08/21 15:15	12/09/21 01:53	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-7

1L07004-07 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:47	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:47	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:47	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:47	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 17:47	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*100 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 17:47*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 17:47*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**28.4**	1.02	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 16:14	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 02:16	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 02:16	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 02:16	TPH 8015M	
Surrogate: 1-Chlorooctane		*73.9 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 02:16*	*TPH 8015M*	
Surrogate: o-Terphenyl		*78.7 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 02:16*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	12/08/21 15:15	12/09/21 02:16	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-8

1L07004-08 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:08	EPA 8021B	
Toluene	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:08	EPA 8021B	
Ethylbenzene	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:08	EPA 8021B	
Xylene (p/m)	ND	0.00204	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:08	EPA 8021B	
Xylene (o)	ND	0.00102	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:08	EPA 8021B	
Surrogate: 1,4-Difluorobenzene		*99.6 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 18:08*	*EPA 8021B*	
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 18:08*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**16.4**	1.02	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 17:00	EPA 300.0	
% Moisture	**2.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.5	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 02:40	TPH 8015M	
>C12-C28	ND	25.5	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 02:40	TPH 8015M	
>C28-C35	ND	25.5	mg/kg dry	1	P1L0815	12/08/21 15:15	12/09/21 02:40	TPH 8015M	
Surrogate: 1-Chlorooctane		*79.7 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 02:40*	*TPH 8015M*	
Surrogate: o-Terphenyl		*84.2 %*	*70-130*		*P1L0815*	*12/08/21 15:15*	*12/09/21 02:40*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.5	mg/kg dry	1	[CALC]	12/08/21 15:15	12/09/21 02:40	calc	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BF-9

1L07004-09 (Soil)

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BTEX by 8021B									
Benzene	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:29	EPA 8021B	
Toluene	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:29	EPA 8021B	
Ethylbenzene	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:29	EPA 8021B	
Xylene (p/m)	ND	0.00202	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:29	EPA 8021B	
Xylene (o)	ND	0.00101	mg/kg dry	1	P1L0701	12/07/21 12:15	12/07/21 18:29	EPA 8021B	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 18:29*	*EPA 8021B*	
Surrogate: 1,4-Difluorobenzene		*103 %*	*80-120*		*P1L0701*	*12/07/21 12:15*	*12/07/21 18:29*	*EPA 8021B*	
General Chemistry Parameters by EPA / Standard Methods									
Chloride	**37.1**	1.01	mg/kg dry	1	P1L0712	12/07/21 16:38	12/08/21 17:46	EPA 300.0	
% Moisture	**1.0**	0.1	%	1	P1L0804	12/08/21 08:54	12/08/21 08:55	ASTM D2216	
Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M									
C6-C12	ND	25.3	mg/kg dry	1	P1L0904	12/09/21 10:00	12/09/21 18:12	TPH 8015M	
>C12-C28	ND	25.3	mg/kg dry	1	P1L0904	12/09/21 10:00	12/09/21 18:12	TPH 8015M	
>C28-C35	ND	25.3	mg/kg dry	1	P1L0904	12/09/21 10:00	12/09/21 18:12	TPH 8015M	
Surrogate: 1-Chlorooctane		*70.2 %*	*70-130*		*P1L0904*	*12/09/21 10:00*	*12/09/21 18:12*	*TPH 8015M*	
Surrogate: o-Terphenyl		*71.8 %*	*70-130*		*P1L0904*	*12/09/21 10:00*	*12/09/21 18:12*	*TPH 8015M*	
Total Petroleum Hydrocarbon C6-C35	ND	25.3	mg/kg dry	1	[CALC]	12/09/21 10:00	12/09/21 18:12	calc	

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1L0701 - * DEFAULT PREP *** **										
Blank (P1L0701-BLK1)				Prepared & Analyzed: 12/07/21						
Benzene	ND	0.00100	mg/kg wet							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00200	"							
Xylene (o)	ND	0.00100	"							
Surrogate: 1,4-Difluorobenzene	*0.122*		*"*	*0.120*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.124*		*"*	*0.120*		*104*	*80-120*			
LCS (P1L0701-BS1)				Prepared & Analyzed: 12/07/21						
Benzene	0.105	0.00100	mg/kg wet	0.100		105	70-130			
Toluene	0.100	0.00100	"	0.100		100	70-130			
Ethylbenzene	0.106	0.00100	"	0.100		106	70-130			
Xylene (p/m)	0.221	0.00200	"	0.200		110	70-130			
Xylene (o)	0.0979	0.00100	"	0.100		97.9	70-130			
Surrogate: 1,4-Difluorobenzene	*0.120*		*"*	*0.120*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.120*		*"*	*0.120*		*99.7*	*80-120*			
LCS Dup (P1L0701-BSD1)				Prepared & Analyzed: 12/07/21						
Benzene	0.100	0.00100	mg/kg wet	0.100		100	70-130	4.30	20	
Toluene	0.0964	0.00100	"	0.100		96.4	70-130	3.85	20	
Ethylbenzene	0.102	0.00100	"	0.100		102	70-130	4.57	20	
Xylene (p/m)	0.211	0.00200	"	0.200		105	70-130	4.65	20	
Xylene (o)	0.0939	0.00100	"	0.100		93.9	70-130	4.11	20	
Surrogate: 1,4-Difluorobenzene	*0.120*		*"*	*0.120*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.120*		*"*	*0.120*		*100*	*80-120*			
Calibration Check (P1L0701-CCV1)				Prepared & Analyzed: 12/07/21						
Benzene	0.106	0.00100	mg/kg wet	0.100		106	80-120			
Toluene	0.101	0.00100	"	0.100		101	80-120			
Ethylbenzene	0.0998	0.00100	"	0.100		99.8	80-120			
Xylene (p/m)	0.221	0.00200	"	0.200		110	80-120			
Xylene (o)	0.0981	0.00100	"	0.100		98.1	80-120			
Surrogate: 1,4-Difluorobenzene	*0.121*		*"*	*0.120*		*101*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.119*		*"*	*0.120*		*99.4*	*75-125*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

BTEX by 8021B - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1L0701 - * DEFAULT PREP *** **										
Calibration Check (P1L0701-CCV2)				Prepared & Analyzed: 12/07/21						
Benzene	0.113	0.00100	mg/kg wet	0.100		113	80-120			
Toluene	0.108	0.00100	"	0.100		108	80-120			
Ethylbenzene	0.104	0.00100	"	0.100		104	80-120			
Xylene (p/m)	0.230	0.00200	"	0.200		115	80-120			
Xylene (o)	0.106	0.00100	"	0.100		106	80-120			
Surrogate: 1,4-Difluorobenzene	*0.119*		"	*0.120*		*99.5*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.121*		"	*0.120*		*101*	*75-125*			
Calibration Check (P1L0701-CCV3)				Prepared & Analyzed: 12/07/21						
Benzene	0.116	0.00100	mg/kg wet	0.100		116	80-120			
Toluene	0.111	0.00100	"	0.100		111	80-120			
Ethylbenzene	0.106	0.00100	"	0.100		106	80-120			
Xylene (p/m)	0.234	0.00200	"	0.200		117	80-120			
Xylene (o)	0.108	0.00100	"	0.100		108	80-120			
Surrogate: 1,4-Difluorobenzene	*0.124*		"	*0.120*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*0.128*		"	*0.120*		*107*	*75-125*			
Matrix Spike (P1L0701-MS1)		**Source: 1L06008-01**		Prepared & Analyzed: 12/07/21						
Benzene	0.0988	0.00114	mg/kg dry	0.114	ND	86.9	80-120			
Toluene	0.0893	0.00114	"	0.114	ND	78.6	80-120			QM-07
Ethylbenzene	0.0890	0.00114	"	0.114	ND	78.3	80-120			QM-07
Xylene (p/m)	0.182	0.00227	"	0.227	0.00153	79.3	80-120			QM-07
Xylene (o)	0.0786	0.00114	"	0.114	ND	69.2	80-120			QM-07
Surrogate: 1,4-Difluorobenzene	*0.142*		"	*0.136*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*0.149*		"	*0.136*		*109*	*80-120*			
Matrix Spike Dup (P1L0701-MSD1)		**Source: 1L06008-01**		Prepared & Analyzed: 12/07/21						
Benzene	0.0913	0.00114	mg/kg dry	0.114	ND	80.4	80-120	7.82	20	
Toluene	0.0839	0.00114	"	0.114	ND	73.8	80-120	6.26	20	QM-07
Ethylbenzene	0.0844	0.00114	"	0.114	ND	74.3	80-120	5.28	20	QM-07
Xylene (p/m)	0.172	0.00227	"	0.227	0.00153	75.0	80-120	5.58	20	QM-07
Xylene (o)	0.0767	0.00114	"	0.114	ND	67.5	80-120	2.47	20	QM-07
Surrogate: 4-Bromofluorobenzene	*0.143*		"	*0.136*		*105*	*80-120*			
Surrogate: 1,4-Difluorobenzene	*0.137*		"	*0.136*		*100*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1L0712 - * DEFAULT PREP *** **										
Blank (P1L0712-BLK1)				Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	ND	1.00	mg/kg wet							
LCS (P1L0712-BS1)				Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	42.5		mg/kg	40.0		106	90-110			
LCS Dup (P1L0712-BSD1)				Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	42.9		mg/kg	40.0		107	90-110	1.00	10	
Calibration Check (P1L0712-CCV1)				Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	20.9		mg/kg	20.0		105	90-110			
Calibration Check (P1L0712-CCV2)				Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	20.7		mg/kg	20.0		104	90-110			
Calibration Check (P1L0712-CCV3)				Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	20.7		mg/kg	20.0		104	90-110			
Matrix Spike (P1L0712-MS1)		**Source: 1L06007-06**		Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	4160	28.1	mg/kg dry	2810	1220	105	80-120			
Matrix Spike (P1L0712-MS2)		**Source: 1L07004-08**		Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	525	1.02	mg/kg dry	510	16.4	99.7	80-120			
Matrix Spike Dup (P1L0712-MSD1)		**Source: 1L06007-06**		Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	4180	28.1	mg/kg dry	2810	1220	106	80-120	0.525	20	
Matrix Spike Dup (P1L0712-MSD2)		**Source: 1L07004-08**		Prepared: 12/07/21 Analyzed: 12/08/21						
Chloride	534	1.02	mg/kg dry	510	16.4	101	80-120	1.60	20	

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1L0804 - * DEFAULT PREP *** **										
Blank (P1L0804-BLK1)				Prepared & Analyzed: 12/08/21						
% Moisture	ND	0.1	%							
Duplicate (P1L0804-DUP1)		**Source: 1L07005-01**		Prepared & Analyzed: 12/08/21						
% Moisture	6.0	0.1	%		6.0			0.00	20	

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1L0815 - TX 1005										
Blank (P1L0815-BLK1)				Prepared & Analyzed: 12/08/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*83.4*		*"*	*100*		*83.4*	*70-130*			
Surrogate: o-Terphenyl	*47.6*		*"*	*50.0*		*95.2*	*70-130*			
LCS (P1L0815-BS1)				Prepared & Analyzed: 12/08/21						
C6-C12	909	25.0	mg/kg wet	1000		90.9	75-125			
>C12-C28	917	25.0	"	1000		91.7	75-125			
Surrogate: 1-Chlorooctane	*109*		*"*	*100*		*109*	*70-130*			
Surrogate: o-Terphenyl	*53.1*		*"*	*50.0*		*106*	*70-130*			
LCS Dup (P1L0815-BSD1)				Prepared & Analyzed: 12/08/21						
C6-C12	979	25.0	mg/kg wet	1000		97.9	75-125	7.43	20	
>C12-C28	937	25.0	"	1000		93.7	75-125	2.18	20	
Surrogate: 1-Chlorooctane	*116*		*"*	*100*		*116*	*70-130*			
Surrogate: o-Terphenyl	*56.7*		*"*	*50.0*		*113*	*70-130*			
Calibration Check (P1L0815-CCV1)				Prepared & Analyzed: 12/08/21						
C6-C12	493	25.0	mg/kg wet	500		98.6	85-115			
>C12-C28	472	25.0	"	500		94.3	85-115			
Surrogate: 1-Chlorooctane	*102*		*"*	*100*		*102*	*70-130*			
Surrogate: o-Terphenyl	*55.0*		*"*	*50.0*		*110*	*70-130*			
Calibration Check (P1L0815-CCV2)				Prepared & Analyzed: 12/08/21						
C6-C12	427	25.0	mg/kg wet	500		85.4	85-115			
>C12-C28	429	25.0	"	500		85.8	85-115			
Surrogate: 1-Chlorooctane	*97.0*		*"*	*100*		*97.0*	*70-130*			
Surrogate: o-Terphenyl	*46.8*		*"*	*50.0*		*93.5*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1L0815 - TX 1005										
Calibration Check (P1L0815-CCV3)				Prepared: 12/08/21 Analyzed: 12/09/21						
C6-C12	436	25.0	mg/kg wet	500		87.2	85-115			
>C12-C28	427	25.0	"	500		85.4	85-115			
Surrogate: 1-Chlorooctane	*96.3*		*"*	*100*		*96.3*	*70-130*			
Surrogate: o-Terphenyl	*45.7*		*"*	*50.0*		*91.4*	*70-130*			
Matrix Spike (P1L0815-MS1)	**Source: 1L07004-08**			Prepared: 12/08/21 Analyzed: 12/09/21						
C6-C12	953	25.5	mg/kg dry	1020	16.8	91.7	75-125			
>C12-C28	845	25.5	"	1020	22.1	80.6	75-125			
Surrogate: 1-Chlorooctane	*110*		*"*	*102*		*108*	*70-130*			
Surrogate: o-Terphenyl	*65.6*		*"*	*51.0*		*129*	*70-130*			
Matrix Spike Dup (P1L0815-MSD1)	**Source: 1L07004-08**			Prepared: 12/08/21 Analyzed: 12/09/21						
C6-C12	908	25.5	mg/kg dry	1020	16.8	87.4	75-125	4.85	20	
>C12-C28	794	25.5	"	1020	22.1	75.7	75-125	6.30	20	
Surrogate: 1-Chlorooctane	*105*		*"*	*102*		*103*	*70-130*			
Surrogate: o-Terphenyl	*63.4*		*"*	*51.0*		*124*	*70-130*			
Batch P1L0904 - TX 1005										
Blank (P1L0904-BLK1)				Prepared & Analyzed: 12/09/21						
C6-C12	ND	25.0	mg/kg wet							
>C12-C28	ND	25.0	"							
>C28-C35	ND	25.0	"							
Surrogate: 1-Chlorooctane	*78.0*		*"*	*100*		*78.0*	*70-130*			
Surrogate: o-Terphenyl	*43.5*		*"*	*50.0*		*87.0*	*70-130*			
LCS (P1L0904-BS1)				Prepared & Analyzed: 12/09/21						
C6-C12	889	25.0	mg/kg wet	1000		88.9	75-125			
>C12-C28	809	25.0	"	1000		80.9	75-125			
Surrogate: 1-Chlorooctane	*117*		*"*	*100*		*117*	*70-130*			
Surrogate: o-Terphenyl	*46.9*		*"*	*50.0*		*93.8*	*70-130*			

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Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Total Petroleum Hydrocarbons C6-C35 by EPA Method 8015M - Quality Control

Permian Basin Environmental Lab, L.P.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P1L0904 - TX 1005										
LCS Dup (P1L0904-BSD1)				Prepared & Analyzed: 12/09/21						
C6-C12	905	25.0	mg/kg wet	1000		90.5	75-125	1.74	20	
>C12-C28	842	25.0	"	1000		84.2	75-125	4.09	20	
Surrogate: 1-Chlorooctane	*123*		*"*	*100*		*123*	*70-130*			
Surrogate: o-Terphenyl	*50.5*		*"*	*50.0*		*101*	*70-130*			
Calibration Check (P1L0904-CCV1)				Prepared & Analyzed: 12/09/21						
C6-C12	465	25.0	mg/kg wet	500		93.0	85-115			
>C12-C28	441	25.0	"	500		88.2	85-115			
Surrogate: 1-Chlorooctane	*105*		*"*	*100*		*105*	*70-130*			
Surrogate: o-Terphenyl	*47.8*		*"*	*50.0*		*95.6*	*70-130*			
Calibration Check (P1L0904-CCV2)				Prepared & Analyzed: 12/09/21						
C6-C12	447	25.0	mg/kg wet	500		89.5	85-115			
>C12-C28	430	25.0	"	500		85.9	85-115			
Surrogate: 1-Chlorooctane	*101*		*"*	*100*		*101*	*70-130*			
Surrogate: o-Terphenyl	*45.9*		*"*	*50.0*		*91.8*	*70-130*			
Matrix Spike (P1L0904-MS1)		**Source: 1L08011-04**		Prepared: 12/09/21 Analyzed: 12/10/21						
C6-C12	758	26.6	mg/kg dry	1060	26.5	68.7	75-125			QM-05
>C12-C28	697	26.6	"	1060	19.9	63.7	75-125			QM-05
Surrogate: 1-Chlorooctane	*91.8*		*"*	*106*		*86.3*	*70-130*			
Surrogate: o-Terphenyl	*35.2*		*"*	*53.2*		*66.1*	*70-130*			*S-GC*
Matrix Spike Dup (P1L0904-MSD1)		**Source: 1L08011-04**		Prepared: 12/09/21 Analyzed: 12/10/21						
C6-C12	791	26.6	mg/kg dry	1060	26.5	71.9	75-125	4.44	20	QM-05
>C12-C28	728	26.6	"	1060	19.9	66.6	75-125	4.49	20	QM-05
Surrogate: 1-Chlorooctane	*88.6*		*"*	*106*		*83.3*	*70-130*			
Surrogate: o-Terphenyl	*32.5*		*"*	*53.2*		*61.1*	*70-130*			*S-GC*

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

Notes and Definitions

S-GC	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
ROI	Received on Ice
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
NPBEL C(	Chain of Custody was not generated at PBELAB
BULK	Samples received in Bulk soil containers may be biased low in the nC6-C12 TPH Range
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Brent Barron Date: 12/20/2021

Brent Barron, Laboratory Director/Technical Director

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Permian Basin Environmental Lab.

Larson & Associates, Inc.	Project: Mack PW
P.O. Box 50685	Project Number: 21-0105-04
Midland TX, 79710	Project Manager: Mark Larson

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CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 12/6/2021 PAGE 1 OF 1

PO#: _____ LAB WORK ORDER#: 1L07004

PROJECT LOCATION OR NAME: Mack Pw

LAI PROJECT #: 21-0105-04 COLLECTOR: RW

TRRP report? ☐ Yes ☒ No

TIME ZONE: Time zone/State: MST/NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 ❑ NaOH ❑	ICE	UNPRESSERVED	ANALYSES: BTEX ❑ MTBE ❑ TRPH 418.1 ❑ TPH 1005 ❑ TPH 1006 ❑ GASOLINE MOD 8015 ❑ DIESEL - MOD 8015 ❑ OIL - MOD 8015 ❑ VOC 8260 ❑ SVOC 8270 ❑ PAH 8270 ❑ HOLDPAH ❑ 8081 PESTICIDES ❑ 8151 HERBICIDES ❑ 8082 PCBS ❑ TCLP - METALS (RCRA) ❑ TCLP VOC ❑ TCLP - PEST ❑ HERB ❑ Semi-VOC ❑ TOTAL METALS (RCRA) ❑ OTHER LIST ❑ LEAD - TOTAL ❑ D.W. 200.8 ❑ TCLP ❑ RCI ❑ TOX ❑ FLASHPOINT ❑ TDS ❑ TSS ❑ % MOISTURE ❑ CYANIDE ❑ pH ❑ HEXAVALENT CHROMIUM ❑ EXPLOSIVES ❑ PECHLORATE ❑ CHLORIDE ☒ ANIONS ❑ ALKALINITY ❑	FIELD NOTES
BF-1		12/6/21	1130	S	1				X		X	X X X X
BF-2			1131									
BF-3			1132									
BF-4			1133									
BF-5			1134									
BF-6			1135									
BF-7			1136									
BF-8			1137									
BF-9			1138									
TOTAL					9							

RELINQUISHED BY:(Signature) DATE/TIME 12/6/21 1649 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME 12/7/21 10:23 RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: PBEL

TURN AROUND TIME
NORMAL ☒
1 DAY ❑
2 DAY ❑
OTHER ❑

LABORATORY USE ONLY:
RECEIVING TEMP: 1.2.9 THERM#: CF#12
CUSTODY SEALS - ❑ BROKEN ❑ INTACT ❑ NOT USED
❑ CARRIER BILL # _____
❑ HAND DELIVERED

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

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PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

Sample Receipt Checklist

Yes		Notes
✓	Chain of custody present?	
✓	Chain of custody signed/dated/time when relinquished and received?	
✓	Sample date/time present on COC for all samples?	
✓	Samplers name present on COC?	
✓	Chain of Custody agrees with sample labels?	
✓	Sample containers intact?	
X	Custody seals intact on sample bottles?	
✓	Samples in proper container/bottle?	
✓	Sufficient sample volume for indicated test?	
✓	All samples received within holding time?	
✓	Samples received within appropriate temp?	2.9
✓	Analysis requested for all samples submitted?	
	Shipping container/cooler in good condition?	
	Custody seals intact on shipping container/cooler?	

Login Notes:
2oz Jar 1607004

PBELAB

DOC #: PBEL_SAMPLE_CHECKLIST
REVISION #: PBEL_2021_1
REVISION Date: 10/30/2021
EFFECTIVE DATE: 10/30/2021

SAMPLE VARIANCE/NON-CONFORMANCE

Variance/Discrepancy:

Resolution:

Client Contacted

Name:

Date/Time:

NC Initiated by:_____ Approved by:_____

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-9942-1
Laboratory Sample Delivery Group: 21-0105-04
Client Project/Site: Mack PW Release

For:
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Attn: Mr. Mark J Larson

Holly Taylor

Authorized for release by:
1/14/2022 1:12:54 PM

Holly Taylor, Project Manager
(806)794-1296
holly.taylor@eurofinset.com

LINKS
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Have a Question? Ask The Expert
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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Laboratory Job ID: 880-9942-1
SDG: 21-0105-04

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-9942-1
Project/Site: Mack PW Release SDG: 21-0105-04

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Job ID: 880-9942-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-9942-1

Receipt
The samples were received on 1/7/2022 9:56 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -7.1°C

GC VOA
Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-16240 and analytical batch 880-16263 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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

HPLC/IC
Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-16441 and analytical batch 880-16553 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

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

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Client Sample ID: CB-1

Lab Sample ID: 880-9942-1
Matrix: Solid
Date Collected: 12/30/21 10:15
Date Received: 01/07/22 09:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 02:30	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 02:30	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 02:30	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		01/07/22 11:54	01/09/22 02:30	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 02:30	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/07/22 11:54	01/09/22 02:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*292*	*S1+*	*70 - 130*	*01/07/22 11:54*	*01/09/22 02:30*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/07/22 11:54*	*01/09/22 02:30*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 14:28	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 14:28	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*83*		*70 - 130*	*01/07/22 14:36*	*01/08/22 14:28*	*1*
o-Terphenyl (Surr)	*96*		*70 - 130*	*01/07/22 14:36*	*01/08/22 14:28*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**451**	**F1**	5.04		mg/Kg			01/14/22 06:19	1

Client Sample ID: CB-2

Lab Sample ID: 880-9942-2
Matrix: Solid
Date Collected: 12/30/21 10:17
Date Received: 01/07/22 09:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 02:56	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 02:56	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 02:56	1
m,p-Xylenes	<0.00397	U	0.00397		mg/Kg		01/07/22 11:54	01/09/22 02:56	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 02:56	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		01/07/22 11:54	01/09/22 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*241*	*S1+*	*70 - 130*	*01/07/22 11:54*	*01/09/22 02:56*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/07/22 11:54*	*01/09/22 02:56*	*1*

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Client Sample ID: CB-2

Date Collected: 12/30/21 10:17
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-2
Matrix: Solid

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 15:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 15:29	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*88*		*70 - 130*	*01/07/22 14:36*	*01/08/22 15:29*	*1*
o-Terphenyl (Surr)	*102*		*70 - 130*	*01/07/22 14:36*	*01/08/22 15:29*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1110**		4.99		mg/Kg			01/14/22 06:38	1

Client Sample ID: CB-3

Date Collected: 12/30/21 10:19
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-3
Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:21	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:21	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:21	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/07/22 11:54	01/09/22 03:21	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:21	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 11:54	01/09/22 03:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*330*	*S1+*	*70 - 130*	*01/07/22 11:54*	*01/09/22 03:21*	*1*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*	*01/07/22 11:54*	*01/09/22 03:21*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 15:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 15:50	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-9942-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: CB-3 Lab Sample ID: 880-9942-3
Date Collected: 12/30/21 10:19 **Matrix: Solid**
Date Received: 01/07/22 09:56

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*91*		*70 - 130*	*01/07/22 14:36*	*01/08/22 15:50*	*1*
o-Terphenyl (Surr)	*105*		*70 - 130*	*01/07/22 14:36*	*01/08/22 15:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**297**		4.95		mg/Kg			01/14/22 07:39	1

Client Sample ID: CB-4 Lab Sample ID: 880-9942-4
Date Collected: 12/30/21 10:21 **Matrix: Solid**
Date Received: 01/07/22 09:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:48	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:48	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:48	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/07/22 11:54	01/09/22 03:48	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/09/22 03:48	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 11:54	01/09/22 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*298*	*S1+*	*70 - 130*	*01/07/22 11:54*	*01/09/22 03:48*	*1*
1,4-Difluorobenzene (Surr)	*122*		*70 - 130*	*01/07/22 11:54*	*01/09/22 03:48*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 16:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 16:10	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 16:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*93*		*70 - 130*	*01/07/22 14:36*	*01/08/22 16:10*	*1*
o-Terphenyl (Surr)	*105*		*70 - 130*	*01/07/22 14:36*	*01/08/22 16:10*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1180**		5.05		mg/Kg			01/14/22 06:44	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Client Sample ID: CB-5

Lab Sample ID: 880-9942-5
Matrix: Solid
Date Collected: 12/30/21 10:23
Date Received: 01/07/22 09:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 04:14	1
Toluene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 04:14	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 04:14	1
m,p-Xylenes	<0.00396	U	0.00396		mg/Kg		01/07/22 11:54	01/09/22 04:14	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		01/07/22 11:54	01/09/22 04:14	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		01/07/22 11:54	01/09/22 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*239*	*S1+*	*70 - 130*	*01/07/22 11:54*	*01/09/22 04:14*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*01/07/22 11:54*	*01/09/22 04:14*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 16:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 16:30	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*84*		*70 - 130*	*01/07/22 14:36*	*01/08/22 16:30*	*1*
o-Terphenyl (Surr)	*96*		*70 - 130*	*01/07/22 14:36*	*01/08/22 16:30*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1180**		4.97		mg/Kg			01/14/22 06:50	1

Client Sample ID: CB-6

Lab Sample ID: 880-9942-6
Matrix: Solid
Date Collected: 12/30/21 10:25
Date Received: 01/07/22 09:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		01/07/22 11:54	01/09/22 04:41	1
Toluene	<0.00199	U	0.00199		mg/Kg		01/07/22 11:54	01/09/22 04:41	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		01/07/22 11:54	01/09/22 04:41	1
m,p-Xylenes	<0.00398	U	0.00398		mg/Kg		01/07/22 11:54	01/09/22 04:41	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		01/07/22 11:54	01/09/22 04:41	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		01/07/22 11:54	01/09/22 04:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*220*	*S1+*	*70 - 130*	*01/07/22 11:54*	*01/09/22 04:41*	*1*
1,4-Difluorobenzene (Surr)	*129*		*70 - 130*	*01/07/22 11:54*	*01/09/22 04:41*	*1*

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-9942-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: CB-6 Lab Sample ID: 880-9942-6
Date Collected: 12/30/21 10:25 **Matrix: Solid**
Date Received: 01/07/22 09:56

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 16:51	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 16:51	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*79*		*70 - 130*	*01/07/22 14:36*	*01/08/22 16:51*	*1*
o-Terphenyl (Surr)	*91*		*70 - 130*	*01/07/22 14:36*	*01/08/22 16:51*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**323**		4.95		mg/Kg			01/14/22 06:56	1

Client Sample ID: CB-7 Lab Sample ID: 880-9942-7
Date Collected: 12/30/21 10:27 **Matrix: Solid**
Date Received: 01/07/22 09:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:37	01/11/22 05:50	1
Toluene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:37	01/11/22 05:50	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:37	01/11/22 05:50	1
m,p-Xylenes	<0.00402	U	0.00402		mg/Kg		01/07/22 14:37	01/11/22 05:50	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		01/07/22 14:37	01/11/22 05:50	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		01/07/22 14:37	01/11/22 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*01/07/22 14:37*	*01/11/22 05:50*	*1*
1,4-Difluorobenzene (Surr)	*90*		*70 - 130*	*01/07/22 14:37*	*01/11/22 05:50*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 17:11	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 17:11	1

Client Sample Results

Client: Larson & Associates, Inc. Job ID: 880-9942-1
Project/Site: Mack PW Release SDG: 21-0105-04

Client Sample ID: CB-7 Lab Sample ID: 880-9942-7

Date Collected: 12/30/21 10:27 **Matrix: Solid**
Date Received: 01/07/22 09:56

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		01/07/22 14:36	01/08/22 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*87*		*70 - 130*	*01/07/22 14:36*	*01/08/22 17:11*	*1*
o-Terphenyl (Surr)	*98*		*70 - 130*	*01/07/22 14:36*	*01/08/22 17:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**528**		4.98		mg/Kg			01/14/22 07:21	1

Client Sample ID: CB-8 Lab Sample ID: 880-9942-8

Date Collected: 12/30/21 10:29 **Matrix: Solid**
Date Received: 01/07/22 09:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 06:11	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 06:11	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 06:11	1
m,p-Xylenes	<0.00399	U	0.00399		mg/Kg		01/07/22 14:37	01/11/22 06:11	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/11/22 06:11	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		01/07/22 14:37	01/11/22 06:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*01/07/22 14:37*	*01/11/22 06:11*	*1*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*	*01/07/22 14:37*	*01/11/22 06:11*	*1*

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			01/12/22 12:57	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			01/11/22 14:19	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 17:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 17:31	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		01/07/22 14:36	01/08/22 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane (Surr)	*84*		*70 - 130*	*01/07/22 14:36*	*01/08/22 17:31*	*1*
o-Terphenyl (Surr)	*95*		*70 - 130*	*01/07/22 14:36*	*01/08/22 17:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**775**		4.95		mg/Kg			01/14/22 07:27	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9941-A-61-G MS	Matrix Spike	249 S1+	86
880-9941-A-61-H MSD	Matrix Spike Duplicate	206 S1+	134 S1+
880-9942-1	CB-1	292 S1+	106
880-9942-2	CB-2	241 S1+	106
880-9942-3	CB-3	330 S1+	104
880-9942-4	CB-4	298 S1+	122
880-9942-5	CB-5	239 S1+	112
880-9942-6	CB-6	220 S1+	129
880-9942-7	CB-7	108	90
880-9942-8	CB-8	121	103
880-9970-A-1-A MS	Matrix Spike	103	94
880-9970-A-1-B MSD	Matrix Spike Duplicate	106	95
LCS 880-16240/1-A	Lab Control Sample	252 S1+	140 S1+
LCS 880-16282/1-A	Lab Control Sample	102	98
LCSD 880-16240/2-A	Lab Control Sample Dup	227 S1+	136 S1+
LCSD 880-16282/2-A	Lab Control Sample Dup	107	100
MB 880-16240/5-A	Method Blank	139 S1+	112
MB 880-16263/39	Method Blank	138 S1+	106
MB 880-16273/5-A	Method Blank	120	108
MB 880-16282/5-A	Method Blank	120	106

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-9942-1	CB-1	83	96
880-9942-1 MS	CB-1	77	76
880-9942-1 MSD	CB-1	85	85
880-9942-2	CB-2	88	102
880-9942-3	CB-3	91	105
880-9942-4	CB-4	93	105
880-9942-5	CB-5	84	96
880-9942-6	CB-6	79	91
880-9942-7	CB-7	87	98
880-9942-8	CB-8	84	95
LCS 880-16281/2-A	Lab Control Sample	103	106
LCSD 880-16281/3-A	Lab Control Sample Dup	108	112
MB 880-16281/1-A	Method Blank	82	98

Surrogate Legend

1CO = 1-Chlorooctane (Surr)
OTPH = o-Terphenyl (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-16240/5-A
Matrix: Solid
Analysis Batch: 16263

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16240

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/08/22 20:23	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/08/22 20:23	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/08/22 20:23	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/07/22 11:54	01/08/22 20:23	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 11:54	01/08/22 20:23	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 11:54	01/08/22 20:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*139*	*S1+*	*70 - 130*	*01/07/22 11:54*	*01/08/22 20:23*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*01/07/22 11:54*	*01/08/22 20:23*	*1*

Lab Sample ID: LCS 880-16240/1-A
Matrix: Solid
Analysis Batch: 16263

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16240

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.1237		mg/Kg		124	70 - 130		
Toluene			0.100	0.1229		mg/Kg		123	70 - 130		
Ethylbenzene			0.100	0.1213		mg/Kg		121	70 - 130		
m,p-Xylenes			0.200	0.2463		mg/Kg		123	70 - 130		
o-Xylene			0.100	0.1210		mg/Kg		121	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*252*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*140*	*S1+*	*70 - 130*

Lab Sample ID: LCSD 880-16240/2-A
Matrix: Solid
Analysis Batch: 16263

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16240

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.1032		mg/Kg		103	70 - 130	18	35
Toluene			0.100	0.1014		mg/Kg		101	70 - 130	19	35
Ethylbenzene			0.100	0.09986		mg/Kg		100	70 - 130	19	35
m,p-Xylenes			0.200	0.2020		mg/Kg		101	70 - 130	20	35
o-Xylene			0.100	0.1008		mg/Kg		101	70 - 130	18	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*227*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*136*	*S1+*	*70 - 130*

Lab Sample ID: 880-9941-A-61-G MS
Matrix: Solid
Analysis Batch: 16263

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 16240

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00199	U F1	0.0990	0.03153	F1	mg/Kg		32	70 - 130		
Toluene	<0.00199	U F1	0.0990	0.03471	F1	mg/Kg		35	70 - 130		

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QC Sample Results

Client: Larson & Associates, Inc. Job ID: 880-9942-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Lab Sample ID: 880-9941-A-61-G MS **Client Sample ID: Matrix Spike**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16263 **Prep Batch: 16240**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U F1	0.0990	0.05498	F1	mg/Kg		56	70 - 130
m,p-Xylenes	<0.00398	U F1	0.198	0.1044	F1	mg/Kg		53	70 - 130
o-Xylene	<0.00199	U F1	0.0990	0.03710	F1	mg/Kg		37	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*249*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: 880-9941-A-61-H MSD **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16263 **Prep Batch: 16240**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	0.03736	F1	mg/Kg		37	70 - 130	17	35
Toluene	<0.00199	U F1	0.100	0.04148	F1	mg/Kg		41	70 - 130	18	35
Ethylbenzene	<0.00199	U F1	0.100	0.04581	F1	mg/Kg		46	70 - 130	18	35
m,p-Xylenes	<0.00398	U F1	0.201	0.09433	F1	mg/Kg		47	70 - 130	10	35
o-Xylene	<0.00199	U F1	0.100	0.04957	F1	mg/Kg		49	70 - 130	29	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*206*	*S1+*	*70 - 130*
1,4-Difluorobenzene (Surr)	*134*	*S1+*	*70 - 130*

Lab Sample ID: MB 880-16263/39 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16263

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg			01/08/22 06:41	1
Toluene	<0.00200	U	0.00200	mg/Kg			01/08/22 06:41	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg			01/08/22 06:41	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg			01/08/22 06:41	1
o-Xylene	<0.00200	U	0.00200	mg/Kg			01/08/22 06:41	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg			01/08/22 06:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*138*	*S1+*	*70 - 130*		*01/08/22 06:41*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*		*01/08/22 06:41*	*1*

Lab Sample ID: MB 880-16273/5-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 16341 **Prep Batch: 16273**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200	mg/Kg		01/07/22 14:21	01/10/22 10:50	1
Toluene	<0.00200	U	0.00200	mg/Kg		01/07/22 14:21	01/10/22 10:50	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		01/07/22 14:21	01/10/22 10:50	1
m,p-Xylenes	<0.00400	U	0.00400	mg/Kg		01/07/22 14:21	01/10/22 10:50	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

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

Lab Sample ID: MB 880-16273/5-A
Matrix: Solid
Analysis Batch: 16341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16273

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:21	01/10/22 10:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 14:21	01/10/22 10:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/07/22 14:21*	*01/10/22 10:50*	*1*
1,4-Difluorobenzene (Surr)	*108*		*70 - 130*	*01/07/22 14:21*	*01/10/22 10:50*	*1*

Lab Sample ID: MB 880-16282/5-A
Matrix: Solid
Analysis Batch: 16341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16282

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
Toluene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
m,p-Xylenes	<0.00400	U	0.00400		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		01/07/22 14:37	01/10/22 22:45	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		01/07/22 14:37	01/10/22 22:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*01/07/22 14:37*	*01/10/22 22:45*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*01/07/22 14:37*	*01/10/22 22:45*	*1*

Lab Sample ID: LCS 880-16282/1-A
Matrix: Solid
Analysis Batch: 16341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16282

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.100	0.09284		mg/Kg		93	70 - 130		
Toluene			0.100	0.09530		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.09449		mg/Kg		94	70 - 130		
m,p-Xylenes			0.200	0.1883		mg/Kg		94	70 - 130		
o-Xylene			0.100	0.08928		mg/Kg		89	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 880-16282/2-A
Matrix: Solid
Analysis Batch: 16341

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16282

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.100	0.09551		mg/Kg		96	70 - 130	3	35
Toluene			0.100	0.09452		mg/Kg		95	70 - 130	1	35
Ethylbenzene			0.100	0.09939		mg/Kg		99	70 - 130	5	35
m,p-Xylenes			0.200	0.1946		mg/Kg		97	70 - 130	3	35
o-Xylene			0.100	0.09623		mg/Kg		96	70 - 130	7	35

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QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-9970-A-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 16341 — **Prep Batch: 16282**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.07914		mg/Kg		79	70 - 130
Toluene	<0.00200	U	0.0998	0.08145		mg/Kg		82	70 - 130
Ethylbenzene	<0.00200	U	0.0998	0.08486		mg/Kg		85	70 - 130
m,p-Xylenes	<0.00399	U	0.200	0.1614		mg/Kg		81	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08289		mg/Kg		83	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-9970-A-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 16341 — **Prep Batch: 16282**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.100	0.07850		mg/Kg		79	70 - 130	1	35
Toluene	<0.00200	U	0.100	0.08377		mg/Kg		84	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.100	0.08307		mg/Kg		83	70 - 130	2	35
m,p-Xylenes	<0.00399	U	0.200	0.1604		mg/Kg		80	70 - 130	1	35
o-Xylene	<0.00200	U	0.100	0.08218		mg/Kg		82	70 - 130	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

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

Lab Sample ID: MB 880-16281/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 16324 — **Prep Batch: 16281**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0	mg/Kg		01/07/22 14:36	01/08/22 13:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		01/07/22 14:36	01/08/22 13:27	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		01/07/22 14:36	01/08/22 13:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane (Surr)	82		70 - 130	01/07/22 14:36	01/08/22 13:27	1
o-Terphenyl (Surr)	98		70 - 130	01/07/22 14:36	01/08/22 13:27	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

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

Lab Sample ID: LCS 880-16281/2-A
Matrix: Solid
Analysis Batch: 16324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16281

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	792.8		mg/Kg		79	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1073		mg/Kg		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*103*		*70 - 130*
o-Terphenyl (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 880-16281/3-A
Matrix: Solid
Analysis Batch: 16324

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16281

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	876.3		mg/Kg		88	70 - 130	10	20
Diesel Range Organics (Over C10-C28)			1000	1179		mg/Kg		118	70 - 130	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*108*		*70 - 130*
o-Terphenyl (Surr)	*112*		*70 - 130*

Lab Sample ID: 880-9942-1 MS
Matrix: Solid
Analysis Batch: 16324

Client Sample ID: CB-1
Prep Type: Total/NA
Prep Batch: 16281

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	996	843.3		mg/Kg		83	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U	996	1076		mg/Kg		105	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane (Surr)	*77*		*70 - 130*
o-Terphenyl (Surr)	*76*		*70 - 130*

Lab Sample ID: 880-9942-1 MSD
Matrix: Solid
Analysis Batch: 16324

Client Sample ID: CB-1
Prep Type: Total/NA
Prep Batch: 16281

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	966.2		mg/Kg		95	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1231		mg/Kg		121	70 - 130	13	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane (Surr)	*85*		*70 - 130*

Eurofins Midland

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

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

Lab Sample ID: 880-9942-1 MSD
Matrix: Solid
Analysis Batch: 16324

Client Sample ID: CB-1
Prep Type: Total/NA
Prep Batch: 16281

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl (Surr)	85		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-16441/1-A
Matrix: Solid
Analysis Batch: 16553

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			01/14/22 06:01	1

Lab Sample ID: LCS 880-16441/2-A
Matrix: Solid
Analysis Batch: 16553

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			250	269.8		mg/Kg		108	90 - 110		

Lab Sample ID: LCSD 880-16441/3-A
Matrix: Solid
Analysis Batch: 16553

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			250	272.9		mg/Kg		109	90 - 110	1	20

Lab Sample ID: 880-9942-1 MS
Matrix: Solid
Analysis Batch: 16553

Client Sample ID: CB-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	451	F1	252	723.6		mg/Kg		108	90 - 110		

Lab Sample ID: 880-9942-1 MSD
Matrix: Solid
Analysis Batch: 16553

Client Sample ID: CB-1
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	451	F1	252	735.2	F1	mg/Kg		113	90 - 110	2	20

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

GC VOA

Prep Batch: 16240

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Total/NA	Solid	5035	
880-9942-2	CB-2	Total/NA	Solid	5035	
880-9942-3	CB-3	Total/NA	Solid	5035	
880-9942-4	CB-4	Total/NA	Solid	5035	
880-9942-5	CB-5	Total/NA	Solid	5035	
880-9942-6	CB-6	Total/NA	Solid	5035	
MB 880-16240/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16240/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16240/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9941-A-61-G MS	Matrix Spike	Total/NA	Solid	5035	
880-9941-A-61-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 16263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Total/NA	Solid	8021B	16240
880-9942-2	CB-2	Total/NA	Solid	8021B	16240
880-9942-3	CB-3	Total/NA	Solid	8021B	16240
880-9942-4	CB-4	Total/NA	Solid	8021B	16240
880-9942-5	CB-5	Total/NA	Solid	8021B	16240
880-9942-6	CB-6	Total/NA	Solid	8021B	16240
MB 880-16240/5-A	Method Blank	Total/NA	Solid	8021B	16240
MB 880-16263/39	Method Blank	Total/NA	Solid	8021B	
LCS 880-16240/1-A	Lab Control Sample	Total/NA	Solid	8021B	16240
LCSD 880-16240/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16240
880-9941-A-61-G MS	Matrix Spike	Total/NA	Solid	8021B	16240
880-9941-A-61-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16240

Prep Batch: 16273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-16273/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 16282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-7	CB-7	Total/NA	Solid	5035	
880-9942-8	CB-8	Total/NA	Solid	5035	
MB 880-16282/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-16282/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-16282/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-9970-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-9970-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 16341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-7	CB-7	Total/NA	Solid	8021B	16282
880-9942-8	CB-8	Total/NA	Solid	8021B	16282
MB 880-16273/5-A	Method Blank	Total/NA	Solid	8021B	16273
MB 880-16282/5-A	Method Blank	Total/NA	Solid	8021B	16282
LCS 880-16282/1-A	Lab Control Sample	Total/NA	Solid	8021B	16282
LCSD 880-16282/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	16282
880-9970-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	16282
880-9970-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	16282

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

GC VOA

Analysis Batch: 16668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Total/NA	Solid	Total BTEX	
880-9942-2	CB-2	Total/NA	Solid	Total BTEX	
880-9942-3	CB-3	Total/NA	Solid	Total BTEX	
880-9942-4	CB-4	Total/NA	Solid	Total BTEX	
880-9942-5	CB-5	Total/NA	Solid	Total BTEX	
880-9942-6	CB-6	Total/NA	Solid	Total BTEX	
880-9942-7	CB-7	Total/NA	Solid	Total BTEX	
880-9942-8	CB-8	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 16281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Total/NA	Solid	8015NM Prep	
880-9942-2	CB-2	Total/NA	Solid	8015NM Prep	
880-9942-3	CB-3	Total/NA	Solid	8015NM Prep	
880-9942-4	CB-4	Total/NA	Solid	8015NM Prep	
880-9942-5	CB-5	Total/NA	Solid	8015NM Prep	
880-9942-6	CB-6	Total/NA	Solid	8015NM Prep	
880-9942-7	CB-7	Total/NA	Solid	8015NM Prep	
880-9942-8	CB-8	Total/NA	Solid	8015NM Prep	
MB 880-16281/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-16281/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-16281/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-9942-1 MS	CB-1	Total/NA	Solid	8015NM Prep	
880-9942-1 MSD	CB-1	Total/NA	Solid	8015NM Prep	

Analysis Batch: 16324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Total/NA	Solid	8015B NM	16281
880-9942-2	CB-2	Total/NA	Solid	8015B NM	16281
880-9942-3	CB-3	Total/NA	Solid	8015B NM	16281
880-9942-4	CB-4	Total/NA	Solid	8015B NM	16281
880-9942-5	CB-5	Total/NA	Solid	8015B NM	16281
880-9942-6	CB-6	Total/NA	Solid	8015B NM	16281
880-9942-7	CB-7	Total/NA	Solid	8015B NM	16281
880-9942-8	CB-8	Total/NA	Solid	8015B NM	16281
MB 880-16281/1-A	Method Blank	Total/NA	Solid	8015B NM	16281
LCS 880-16281/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	16281
LCSD 880-16281/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	16281
880-9942-1 MS	CB-1	Total/NA	Solid	8015B NM	16281
880-9942-1 MSD	CB-1	Total/NA	Solid	8015B NM	16281

Analysis Batch: 16554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Total/NA	Solid	8015 NM	
880-9942-2	CB-2	Total/NA	Solid	8015 NM	
880-9942-3	CB-3	Total/NA	Solid	8015 NM	
880-9942-4	CB-4	Total/NA	Solid	8015 NM	
880-9942-5	CB-5	Total/NA	Solid	8015 NM	
880-9942-6	CB-6	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

GC Semi VOA (Continued)

Analysis Batch: 16554 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-7	CB-7	Total/NA	Solid	8015 NM	
880-9942-8	CB-8	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 16441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Soluble	Solid	DI Leach	
880-9942-2	CB-2	Soluble	Solid	DI Leach	
880-9942-3	CB-3	Soluble	Solid	DI Leach	
880-9942-4	CB-4	Soluble	Solid	DI Leach	
880-9942-5	CB-5	Soluble	Solid	DI Leach	
880-9942-6	CB-6	Soluble	Solid	DI Leach	
880-9942-7	CB-7	Soluble	Solid	DI Leach	
880-9942-8	CB-8	Soluble	Solid	DI Leach	
MB 880-16441/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-16441/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-16441/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-9942-1 MS	CB-1	Soluble	Solid	DI Leach	
880-9942-1 MSD	CB-1	Soluble	Solid	DI Leach	

Analysis Batch: 16553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-9942-1	CB-1	Soluble	Solid	300.0	16441
880-9942-2	CB-2	Soluble	Solid	300.0	16441
880-9942-3	CB-3	Soluble	Solid	300.0	16441
880-9942-4	CB-4	Soluble	Solid	300.0	16441
880-9942-5	CB-5	Soluble	Solid	300.0	16441
880-9942-6	CB-6	Soluble	Solid	300.0	16441
880-9942-7	CB-7	Soluble	Solid	300.0	16441
880-9942-8	CB-8	Soluble	Solid	300.0	16441
MB 880-16441/1-A	Method Blank	Soluble	Solid	300.0	16441
LCS 880-16441/2-A	Lab Control Sample	Soluble	Solid	300.0	16441
LCSD 880-16441/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	16441
880-9942-1 MS	CB-1	Soluble	Solid	300.0	16441
880-9942-1 MSD	CB-1	Soluble	Solid	300.0	16441

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Client Sample ID: CB-1

Lab Sample ID: 880-9942-1
Matrix: Solid
Date Collected: 12/30/21 10:15
Date Received: 01/07/22 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	16240	01/07/22 11:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16263	01/09/22 02:30	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 14:28	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 06:19	CH	XEN MID

Client Sample ID: CB-2

Lab Sample ID: 880-9942-2
Matrix: Solid
Date Collected: 12/30/21 10:17
Date Received: 01/07/22 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	16240	01/07/22 11:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16263	01/09/22 02:56	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 15:29	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 06:38	CH	XEN MID

Client Sample ID: CB-3

Lab Sample ID: 880-9942-3
Matrix: Solid
Date Collected: 12/30/21 10:19
Date Received: 01/07/22 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16240	01/07/22 11:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16263	01/09/22 03:21	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 15:50	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 07:39	CH	XEN MID

Client Sample ID: CB-4

Lab Sample ID: 880-9942-4
Matrix: Solid
Date Collected: 12/30/21 10:21
Date Received: 01/07/22 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	16240	01/07/22 11:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16263	01/09/22 03:48	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Client Sample ID: CB-4

Date Collected: 12/30/21 10:21
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 16:10	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 06:44	CH	XEN MID

Client Sample ID: CB-5

Date Collected: 12/30/21 10:23
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	16240	01/07/22 11:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16263	01/09/22 04:14	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 16:30	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 06:50	CH	XEN MID

Client Sample ID: CB-6

Date Collected: 12/30/21 10:25
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	16240	01/07/22 11:54	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16263	01/09/22 04:41	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 16:51	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 06:56	CH	XEN MID

Client Sample ID: CB-7

Date Collected: 12/30/21 10:27
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	16282	01/07/22 14:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16341	01/11/22 05:50	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 17:11	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Client Sample ID: CB-7

Date Collected: 12/30/21 10:27
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 07:21	CH	XEN MID

Client Sample ID: CB-8

Date Collected: 12/30/21 10:29
Date Received: 01/07/22 09:56

Lab Sample ID: 880-9942-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	16282	01/07/22 14:37	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	16341	01/11/22 06:11	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			16668	01/12/22 12:57	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			16554	01/11/22 14:19	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	16281	01/07/22 14:36	DM	XEN MID
Total/NA	Analysis	8015B NM		1			16324	01/08/22 17:31	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	16441	01/10/22 13:31	CH	XEN MID
Soluble	Analysis	300.0		1			16553	01/14/22 07:27	CH	XEN MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Laboratory: Eurofins Midland

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

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Larson & Associates, Inc. Job ID: 880-9942-1
Project/Site: Mack PW Release SDG: 21-0105-04

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

Protocol References:

ASTM = ASTM International

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

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: Mack PW Release

Job ID: 880-9942-1
SDG: 21-0105-04

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-9942-1	CB-1	Solid	12/30/21 10:15	01/07/22 09:56
880-9942-2	CB-2	Solid	12/30/21 10:17	01/07/22 09:56
880-9942-3	CB-3	Solid	12/30/21 10:19	01/07/22 09:56
880-9942-4	CB-4	Solid	12/30/21 10:21	01/07/22 09:56
880-9942-5	CB-5	Solid	12/30/21 10:23	01/07/22 09:56
880-9942-6	CB-6	Solid	12/30/21 10:25	01/07/22 09:56
880-9942-7	CB-7	Solid	12/30/21 10:27	01/07/22 09:56
880-9942-8	CB-8	Solid	12/30/21 10:29	01/07/22 09:56

Page 819 of 904

No. 2302

9942

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
507 N Marienfeld Ste 202
Midland TX 79701
432-687 0901

Data Reported to

DATE 1/5/2022 PAGE 1 OF 1

PO# LAB WORK ORDER#

PROJECT LOCATION OR NAME Mack Pw Release

LAI PROJECT # 21-0105-04 COLLECTOR JR

TRRP report? ☐ Yes ☒ No

TIME ZONE Time zone/State MST / NM

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

Field Sample I D	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO_3	H_2SO_4 NaOH	ICE	UNPRESSERVED	ANALYSES: BTEX 8021 MTBE	TPH 418.1	TPH 1005	TPH 1006	GASOLINE MOD 8015	DIESEL MOD 8015	OIL - MOD 8015	VOC 8260	SVOC 8270	PAH 8270	HOLDPAH	8081 PESTICIDES	8151 HERBICIDES	8082 PCBS	TCLP - METALS (RCRA)	TCLP VOC	TCLP - PEST	HERB	Semi-VOC	TOTAL METALS (RCRA)	OTHER LIST	LEAD - TOTAL	D W 200 8	TCLP	RCI	TOX	TDS	TSS	FLASHPOINT	pH	% MOISTURE	EXPLOSIVES	CYANIDE	CHLORIDES	HEXAVALENT CHROMIUM	PECHLORATE	ANIONS	ALKALINITY	FIELD NOTES
CB-1		12/30/21	1015	S	1				X		X				X	X	X																																207
CB-2			1017																																														
CB-3			1019																																														
CB-4			1021																																														
CB-5			1023																																														
CB-6			1025																																														
CB-7			1027																																														
CB-8			1029																																														

TOTAL 8

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)
Cynthia Collins	1/7/22 8:45	John White
John White	01/07/22 9:56	Xenco
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)

LABORATORY Xenco

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP -1/-1 THERM# IR8
CUSTODY SEALS - ☐ BROKEN ☑ INTACT ☐ NOT USED
☐ CARRIER BILL #
☑ HAND DELIVERED

880-9942 Chain of Custody

Page 27 of 28

Received by OCD: 6/16/2022 1:42:34 PM

Released to Imaging: 6/17/2022 2:48:59 PM

1/14/2022

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-9942-1
SDG Number: 21-0105-04

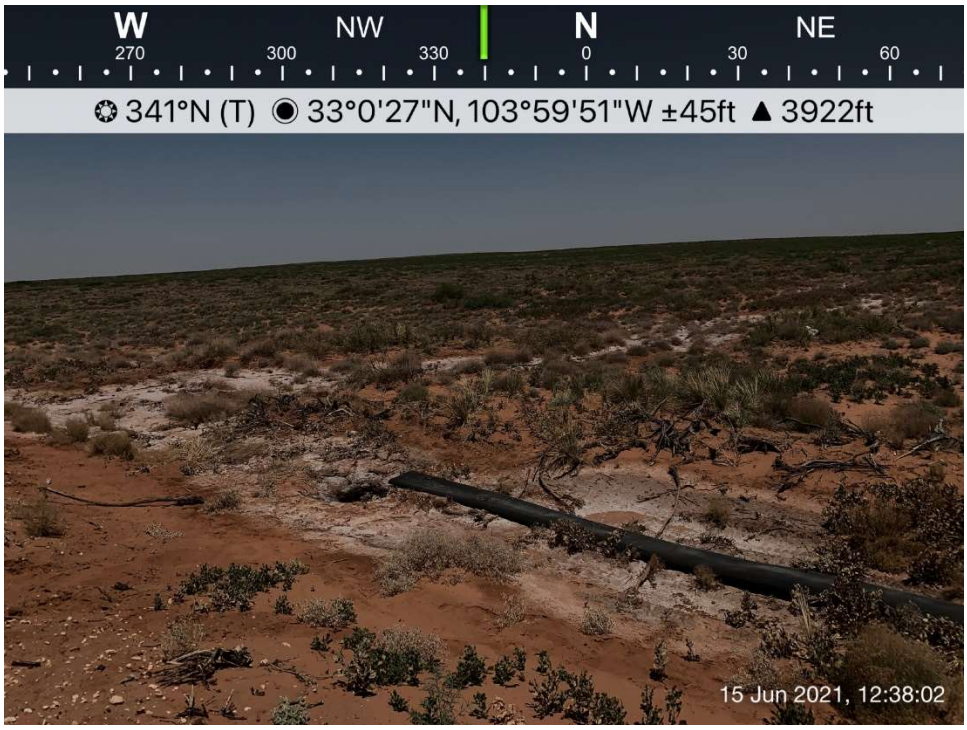
Login Number: 9942
List Number: 1
Creator: Teel, Brianna

List Source: Eurofins Midland

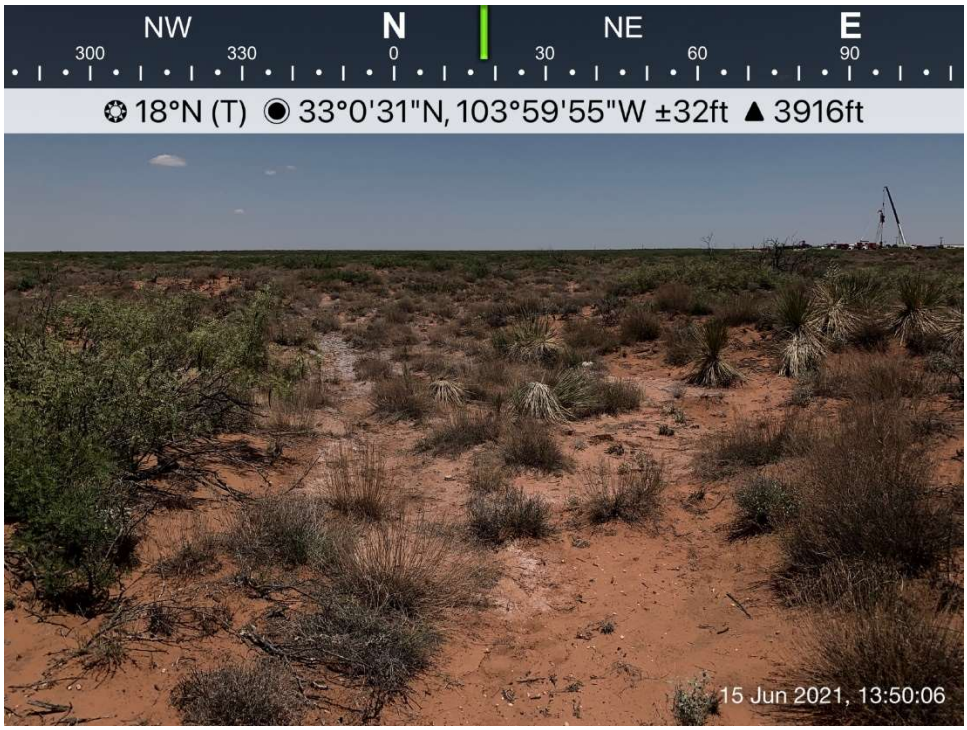
Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same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

Appendix F

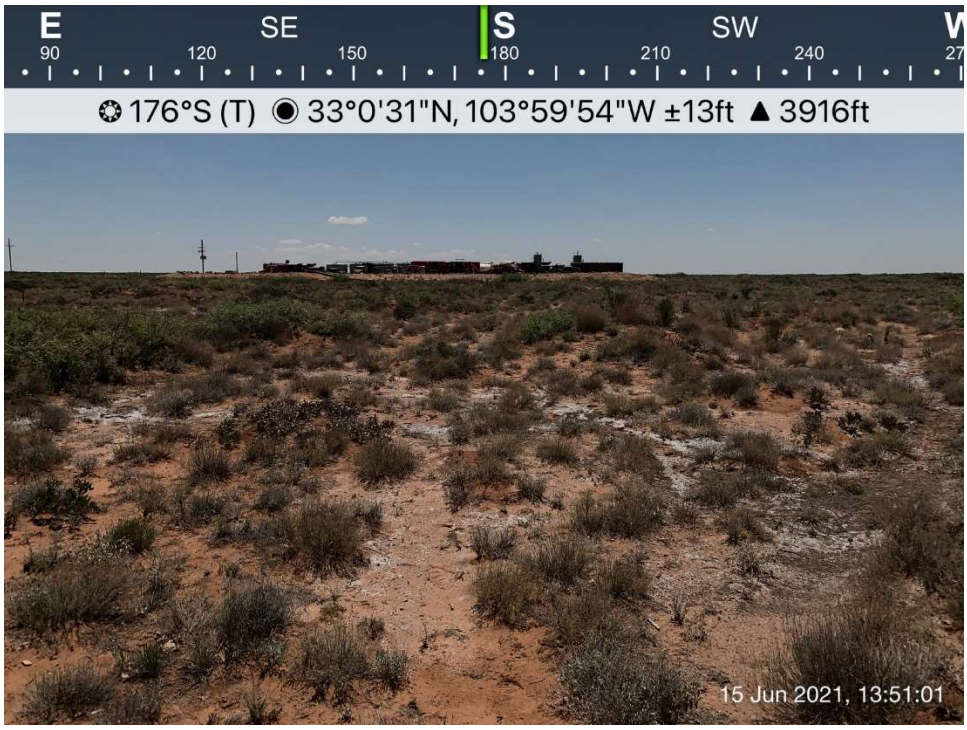
Photographic Documentation



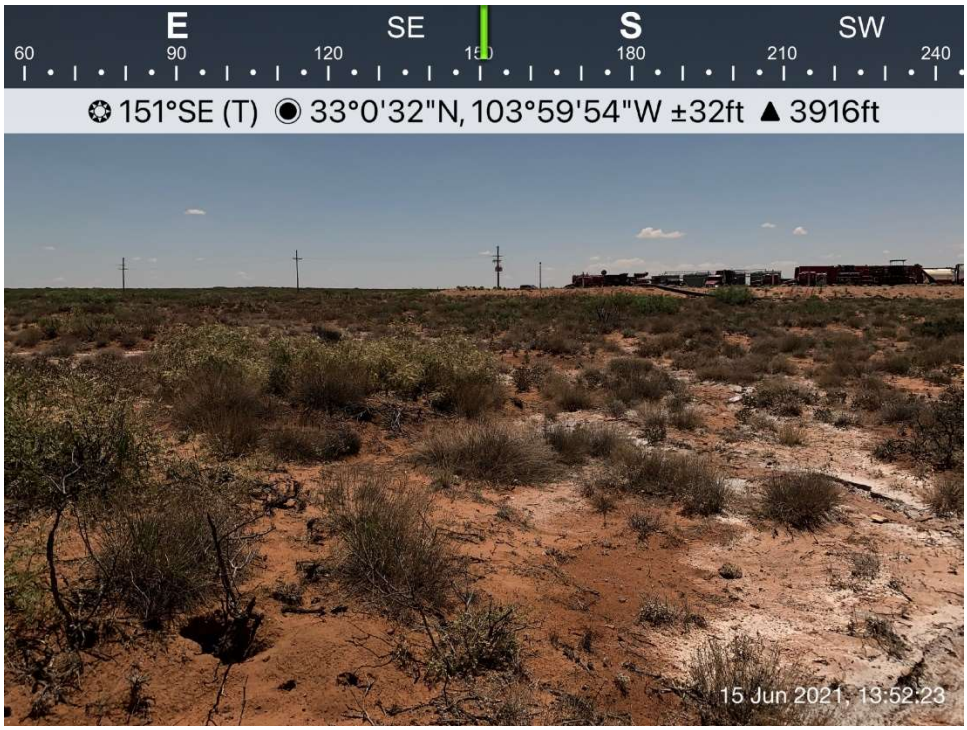
Chloride precipitate related to produced water release, viewing to the north.



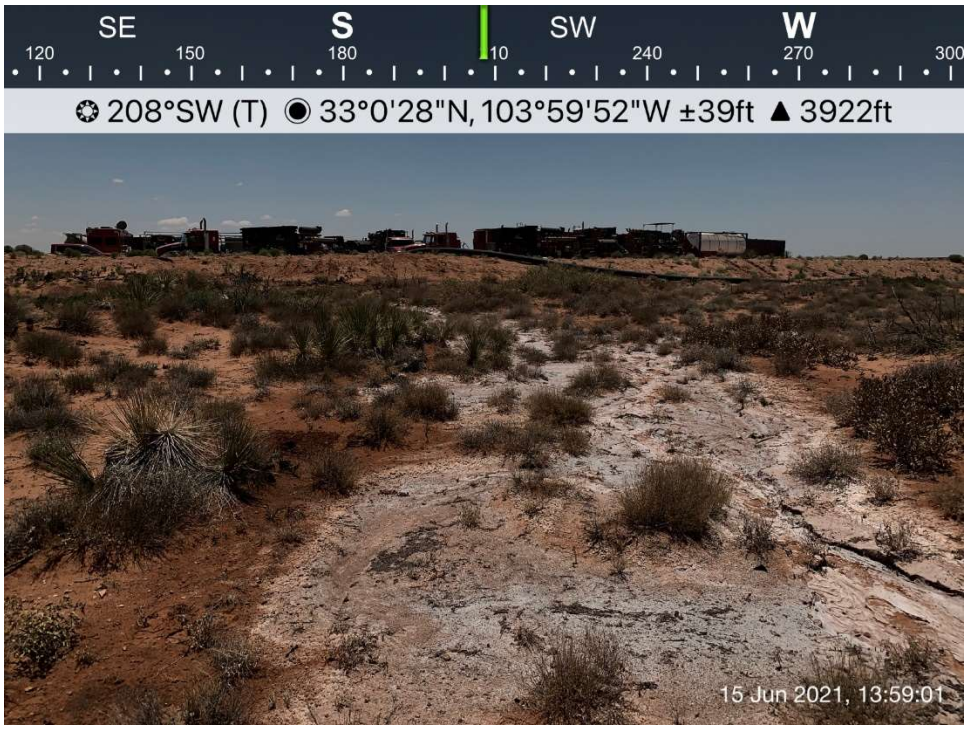
Chloride precipitate related to produced water release, viewing to the north.



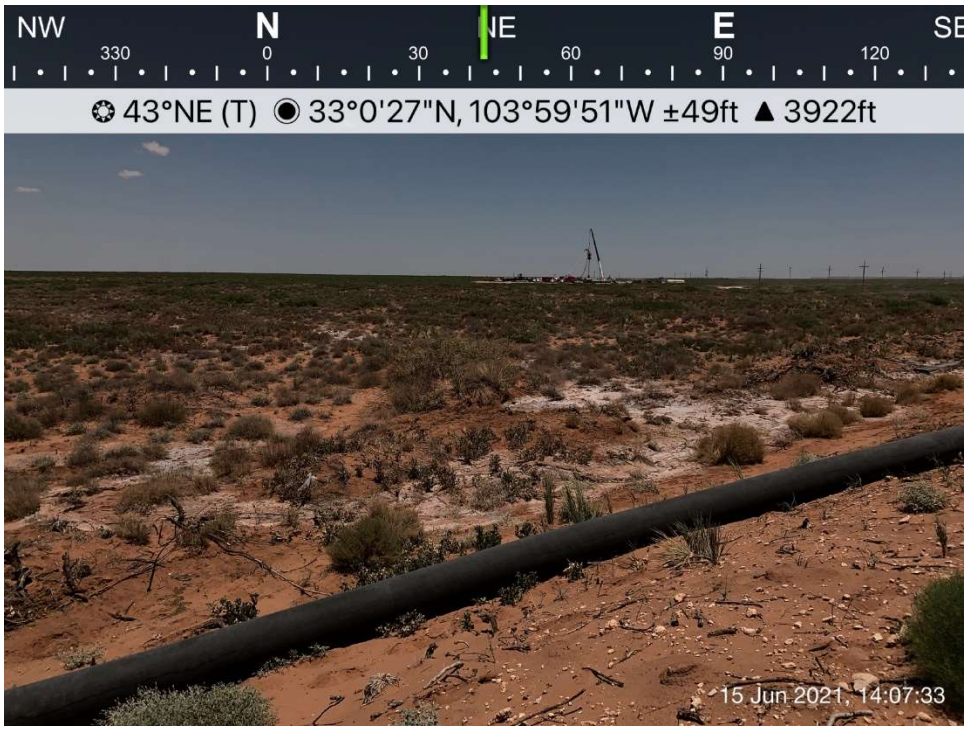
Chloride precipitate related to produced water release, viewing to the south.



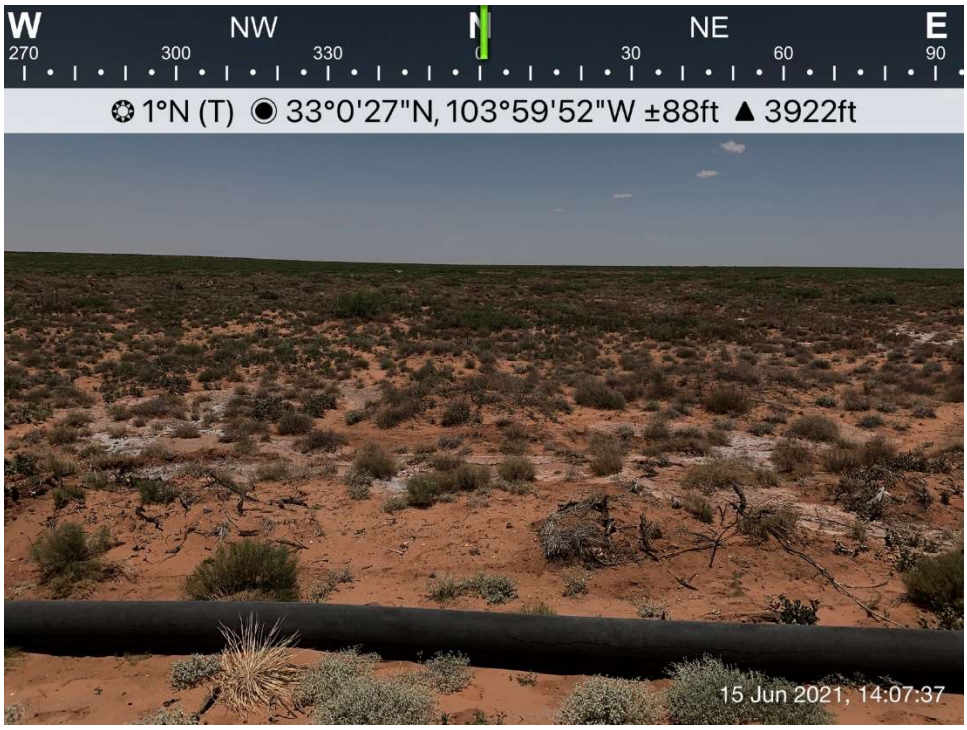
Chloride precipitate related to the produced water release, viewing to the southeast.



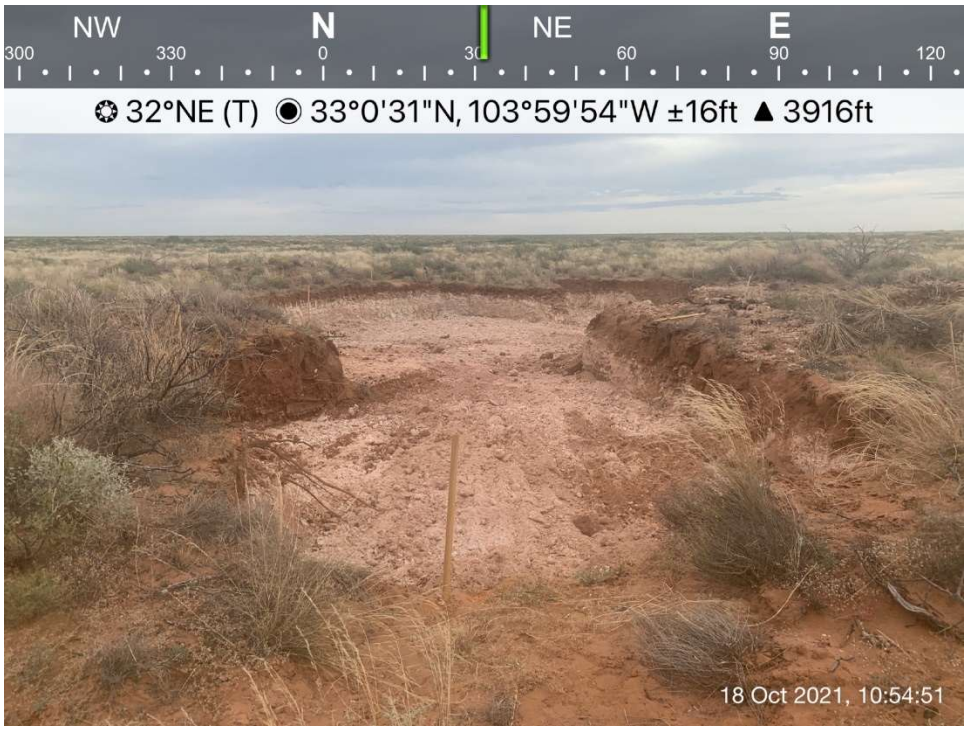
Chloride precipitate related to produced water release, viewing to the southwest.



Chloride precipitate related to produce water release, viewing to the northeast.



Chloride precipitate related to the produced water release, viewing to the north.



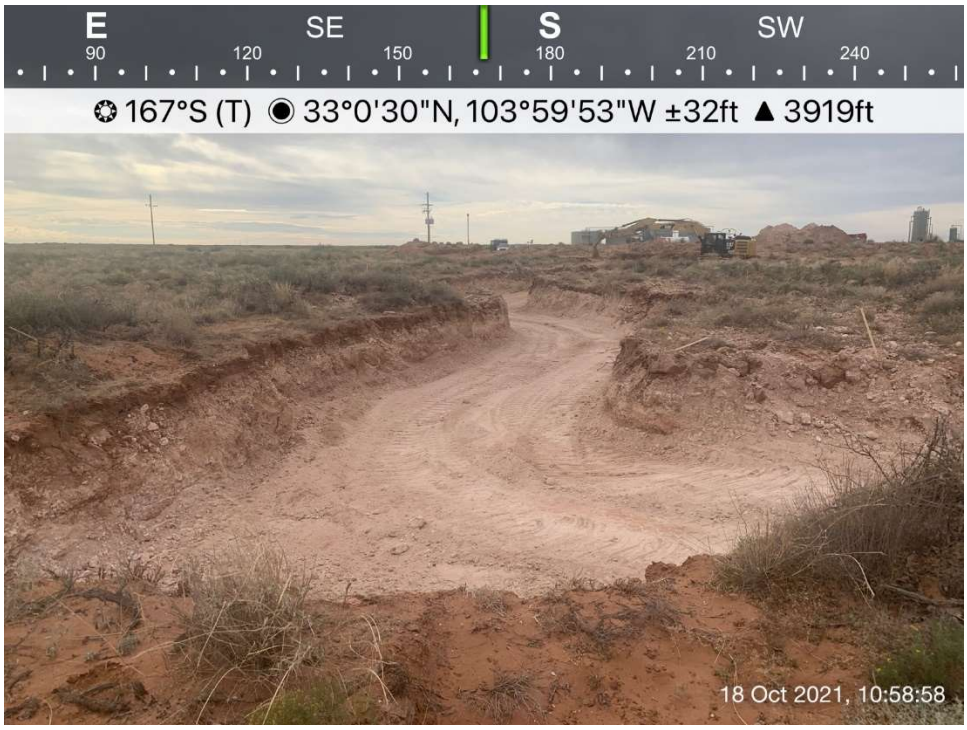
Excavation in northern section of the spill area, viewing to the northeast.

Excavation in the northern section of the spill area, viewing to the southeast.

Excavation in the northern section of the spill area, viewing to the south.

Excavation in the central section of the spill area, viewing to the south.

Excavation in the central section of the spill area, viewing to the southeast.



Excavation in the southern section of the spill area, viewing to the south.

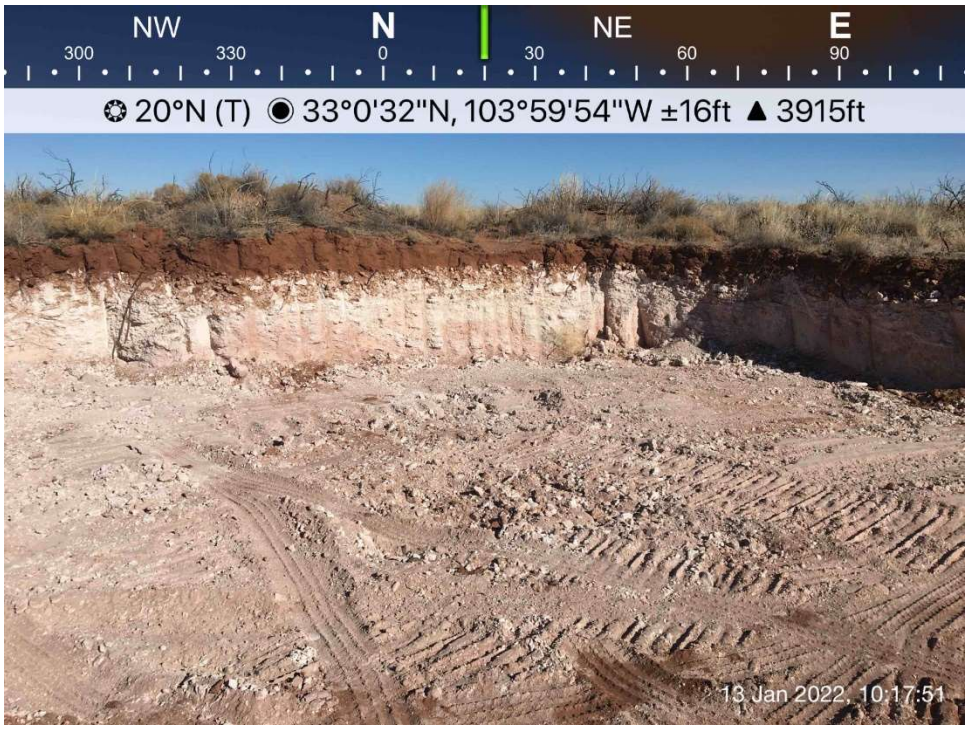
Excavation in the southern section of the spill area, viewing to the south.

Excavation in the southern section of the spill area, viewing to the west.

Excavation in the southern section of the spill area, viewing to the west.

Further excavated sidewalls in northern section of the spill area, viewing to the southwest.

Further excavated sidewalls in northern section of the spill area, viewing to the west.



Further excavated sidewalls in northern section of the spill area, viewing to the north.

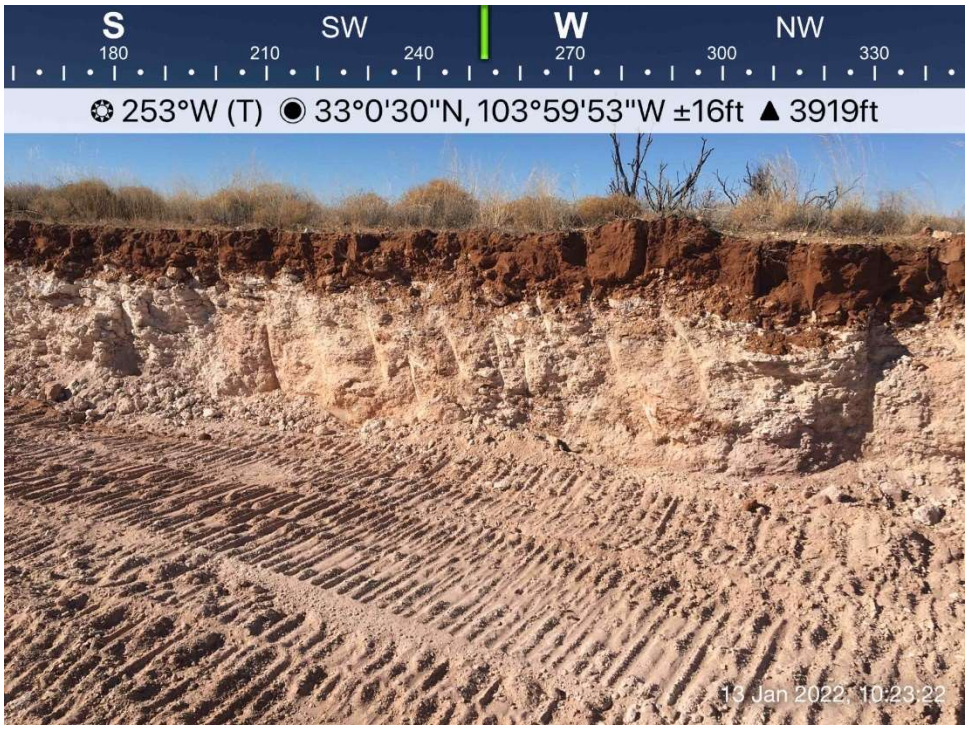
Further excavated sidewalls in northern section of the spill area, viewing to the east.

Further excavated sidewalls in northern section of the spill area, viewing to the southeast.

Further excavated sidewalls in the northern section of the spill area, viewing to the east.

Further excavated sidewalls in the northern section of the spill area, viewing to the west.

Further excavated sidewalls in the central section of the spill area, viewing to the southeast.

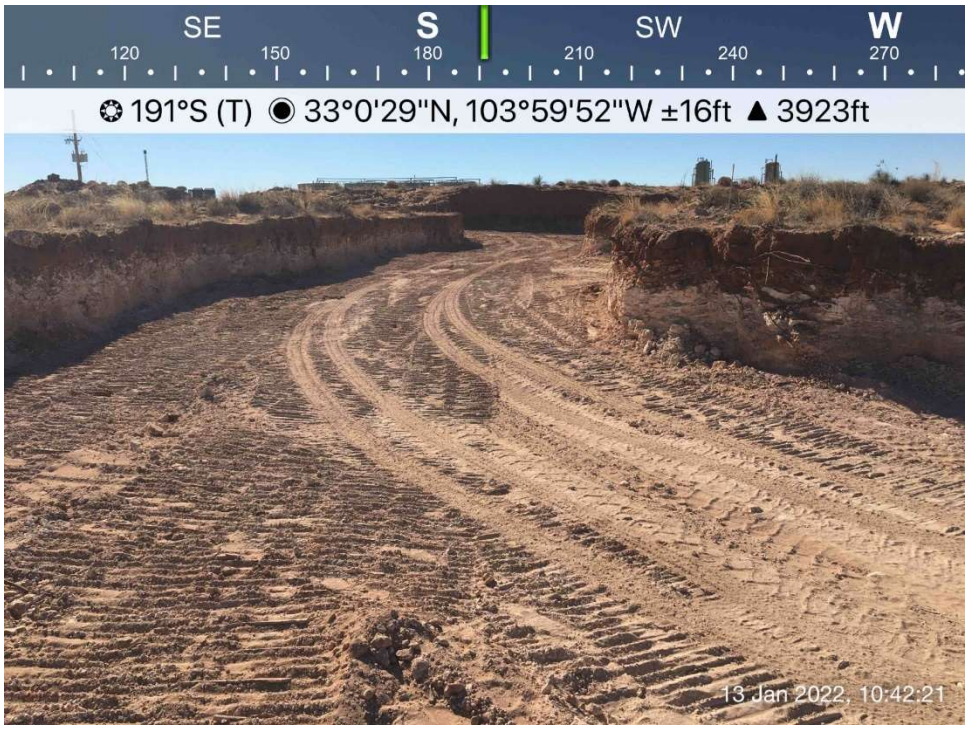


Further excavated sidewalls in the central section of the spill area, viewing to the west.

Further excavated sidewalls in the central section of the spill area, viewing to the east.

Further excavated sidewalls in the central section of the spill area, viewing to the south.

Further excavated sidewalls in the central section of the spill area, viewing to the southeast.



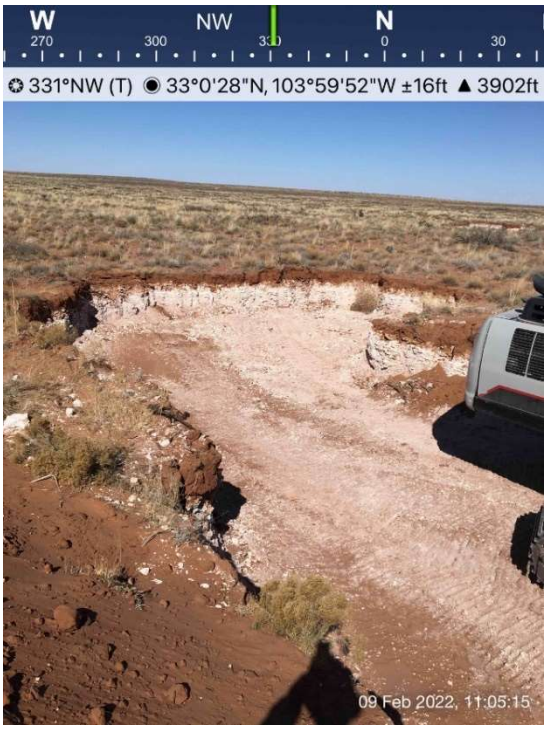
Further excavated sidewalls in the central section of the spill area, viewing to the south.

Further excavated sidewalls in the central section of the spill area, viewing to the west.

Further excavated sidewalls in the southern section of the spill area, viewing to the southwest.

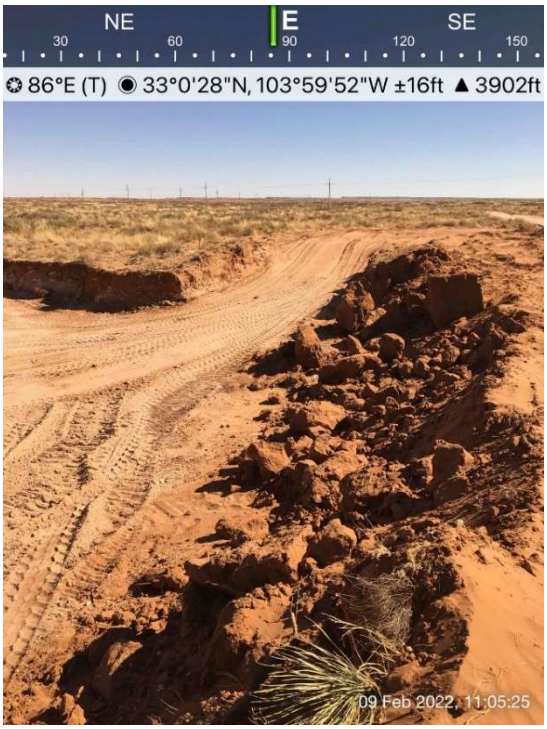
Further excavated sidewalls in the southern section of the spill area, viewing to the northwest.

Further excavated sidewalls in the southern section of the spill area, viewing to the east.

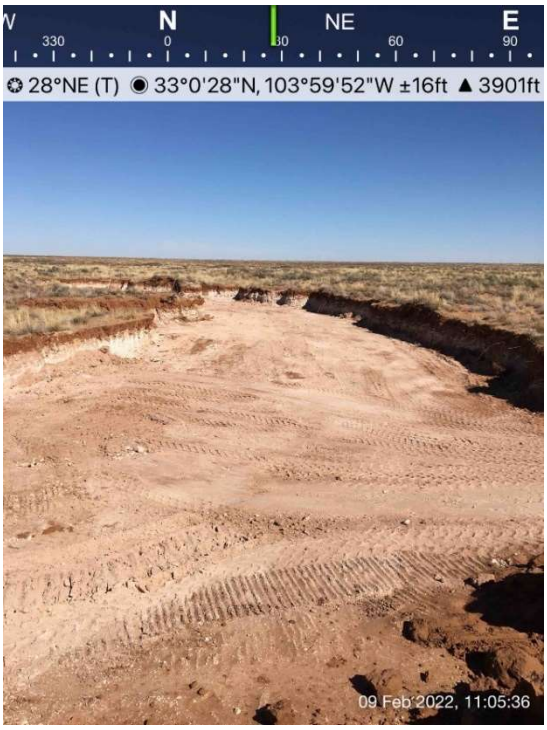


Further excavated sidewalls in the southern section of the spill area, viewing to the northwest.

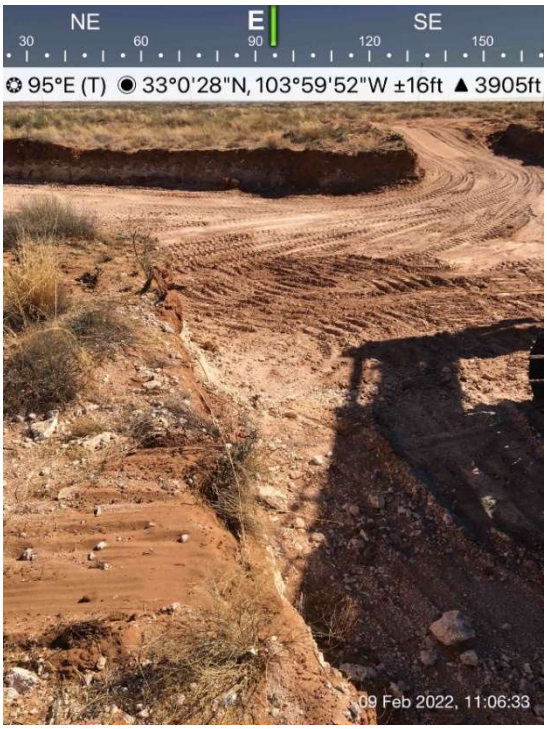
Further excavated sidewalls in the southern section of the spill area, viewing to the northeast.



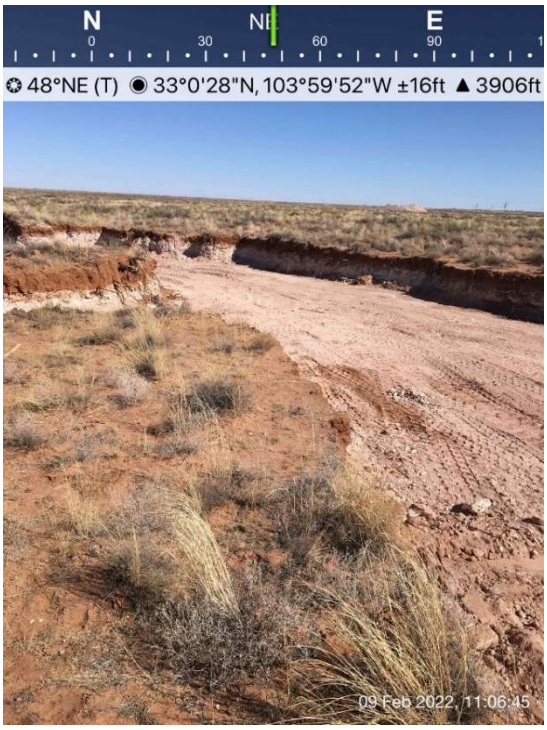
Further excavated sidewalls in the southern section of the spill area, viewing to the east.



Further excavated sidewalls in the southern section of the spill area, viewing to the northeast.

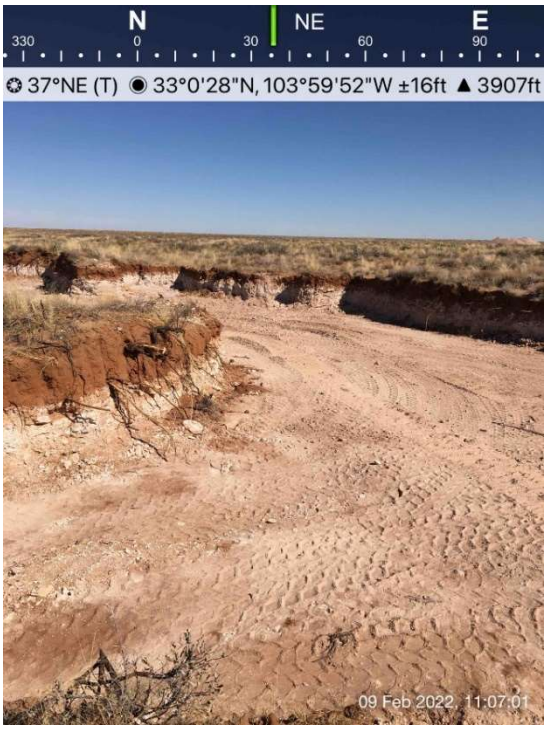


Further excavated sidewalls in the southern section of the spill area, viewing to the east.

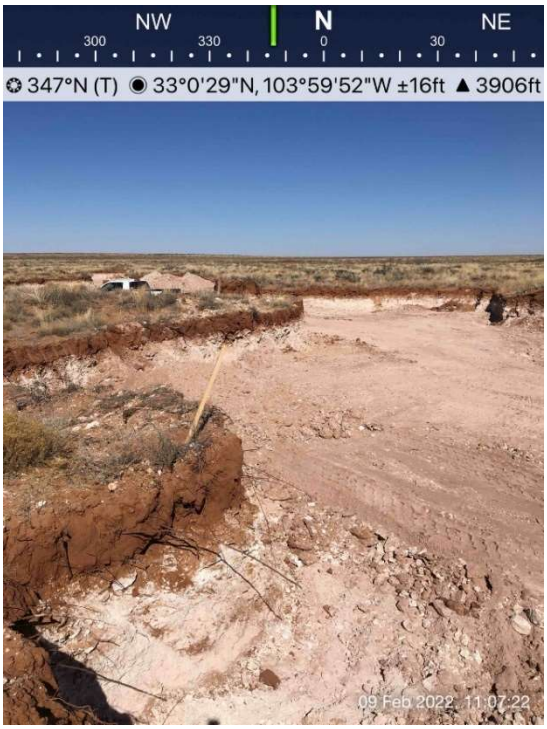


Further excavated sidewalls in the southern section of the spill area, viewing to the northeast.

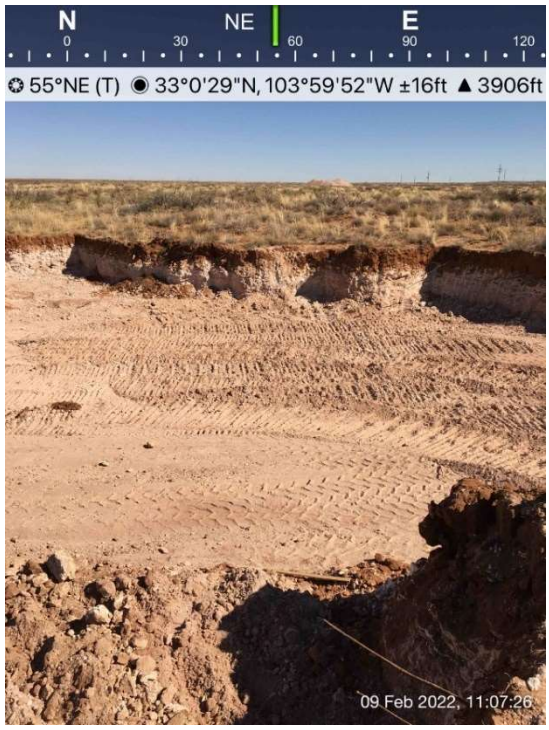
Further excavated sidewalls in the southern section of the spill area, viewing to the north.



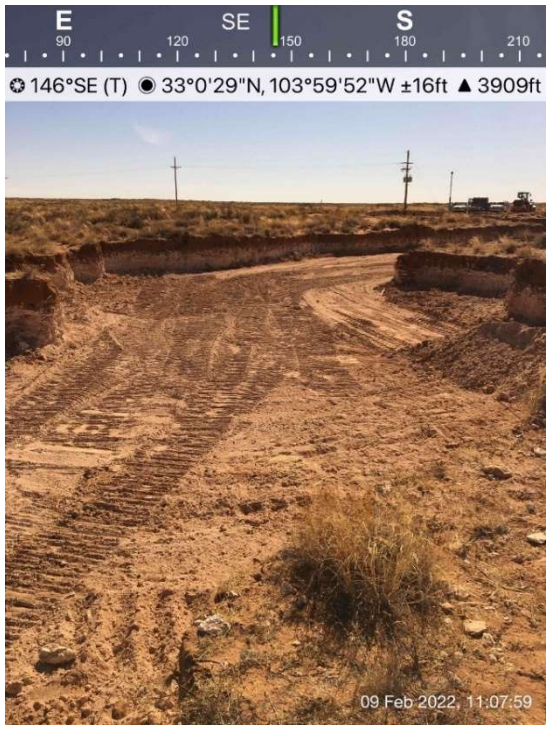
Further excavated sidewalls in the southern section of the spill area, viewing to the northeast.



Further excavated sidewalls in the central section of the spill area, viewing to the north.

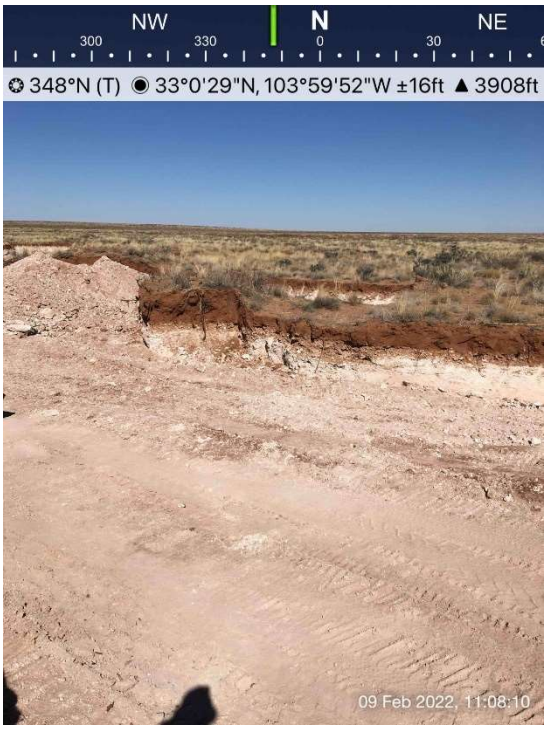


Further excavated sidewalls in the central section of the spill area, viewing to the northeast.

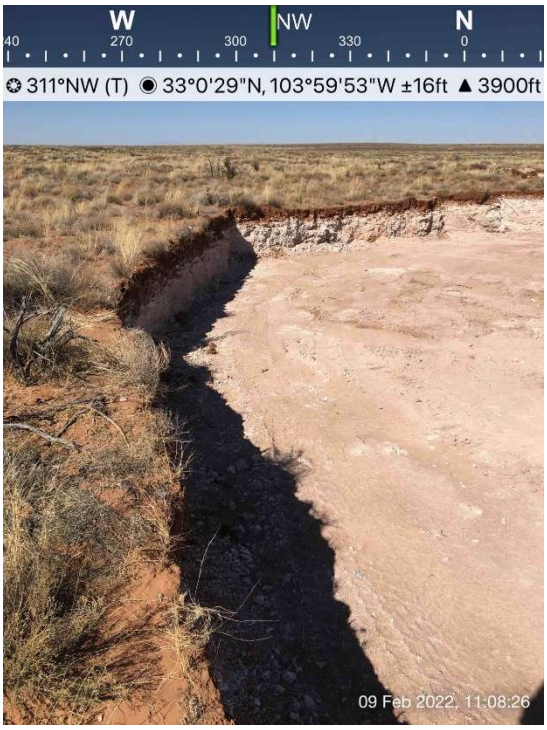


Further excavated sidewalls in the central section of the spill area, viewing to the southeast.

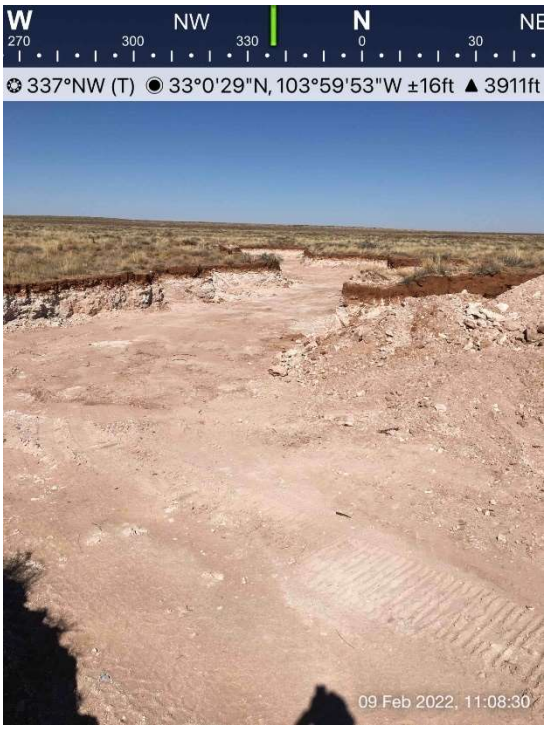
Further excavated sidewalls in the central section of the spill area, viewing to the east.



Further excavated sidewalls in the central section of the spill area, viewing to the north.



Further excavated sidewalls in the central section of the spill area, viewing to the northwest.



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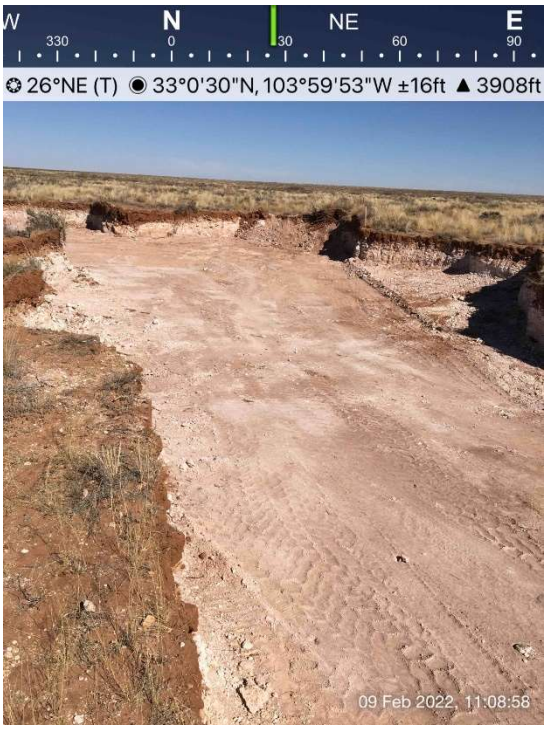
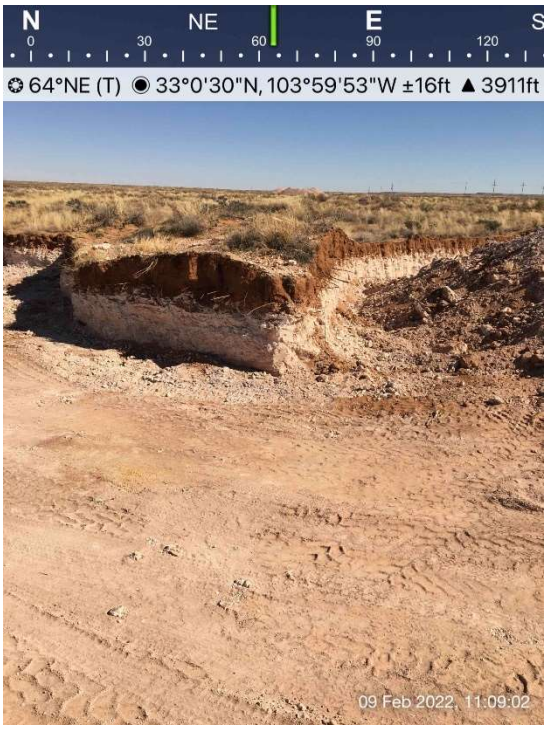
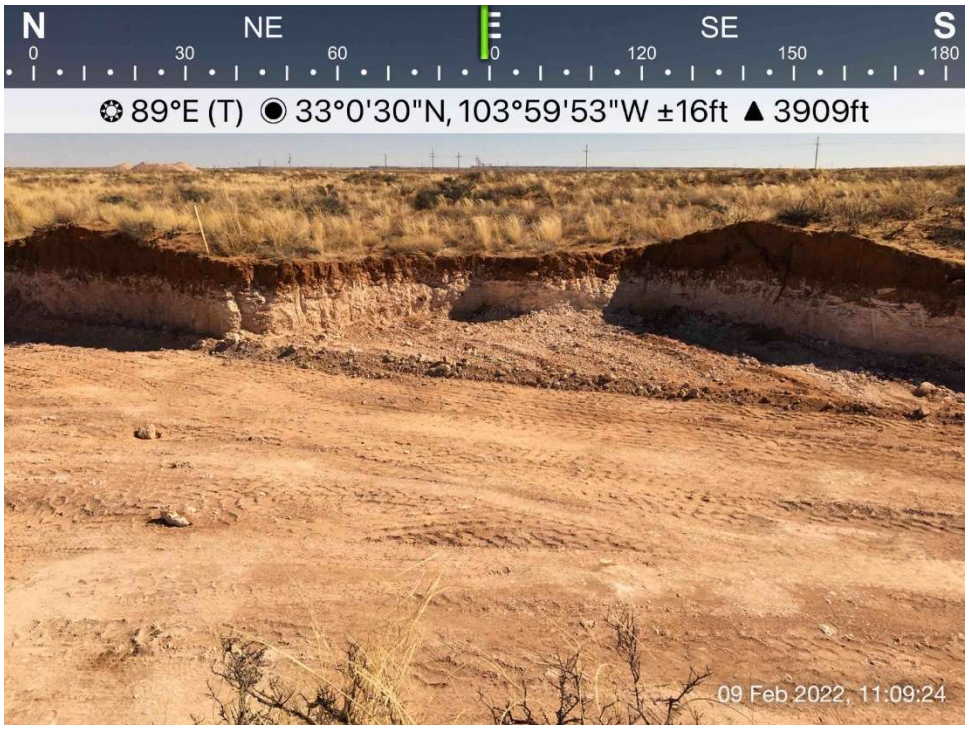


Further excavated sidewalls in the central section of the spill area, viewing to the northeast.



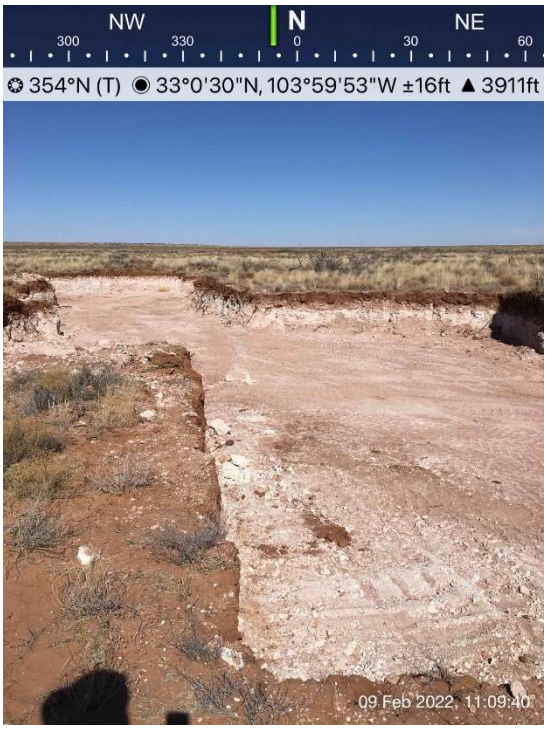
Further excavated sidewalls in the central section of the spill area, viewing to the northeast.



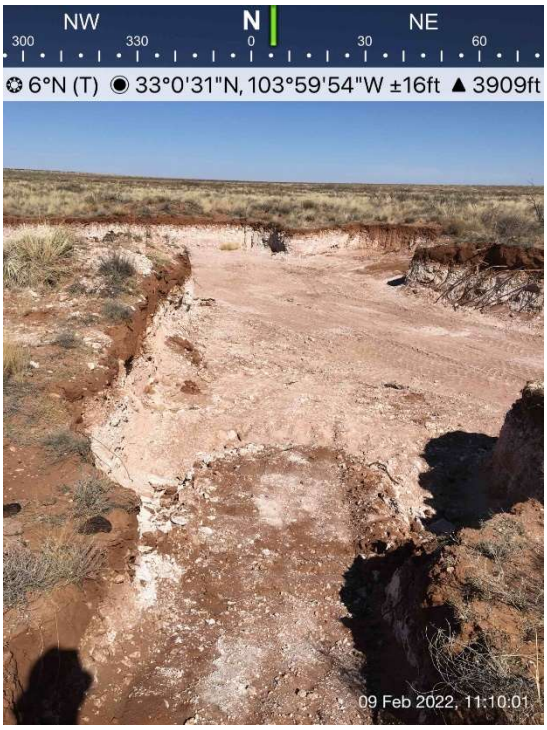
Further excavated sidewalls in the central section of the spill area, viewing to the east.

Further excavated sidewalls in the central section of the spill area, viewing to the northeast.

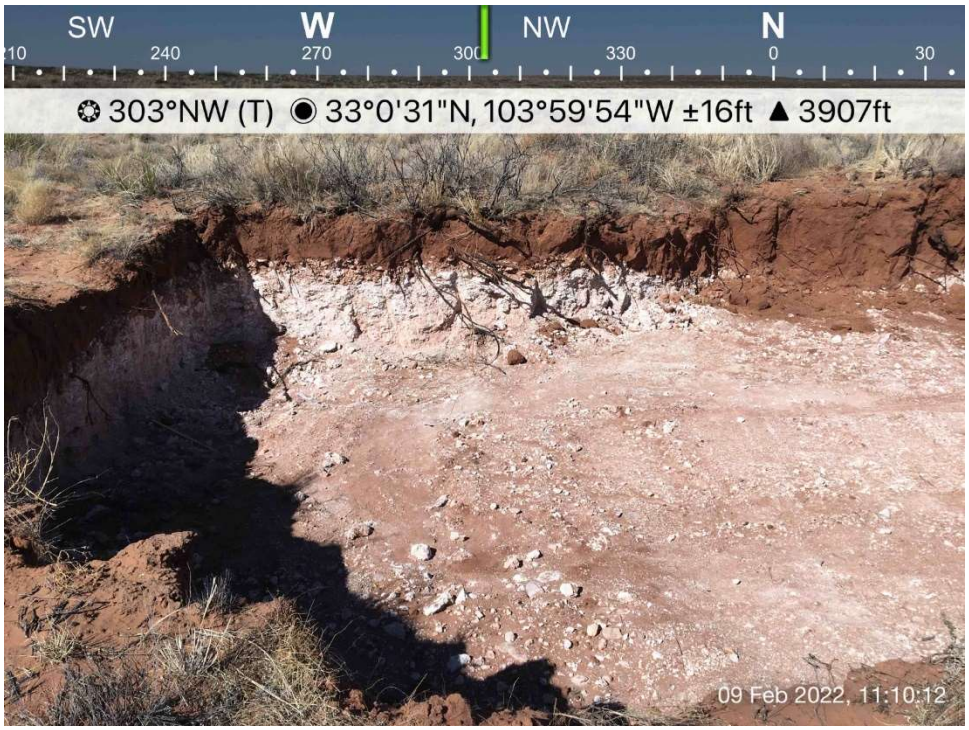
Further excavated sidewalls in the central section of the spill area, viewing to the northwest.



Further excavated sidewalls in the central section of the spill area, viewing to the north.



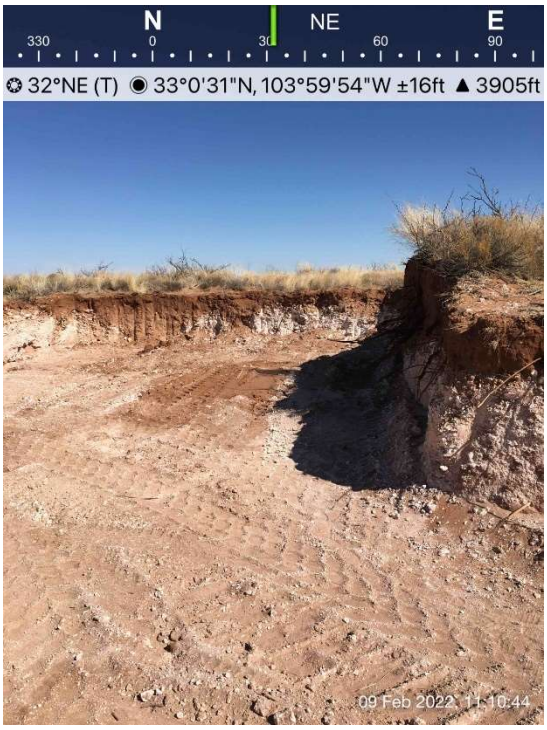
Further excavated sidewalls in the northern section of the spill area, viewing to the north.



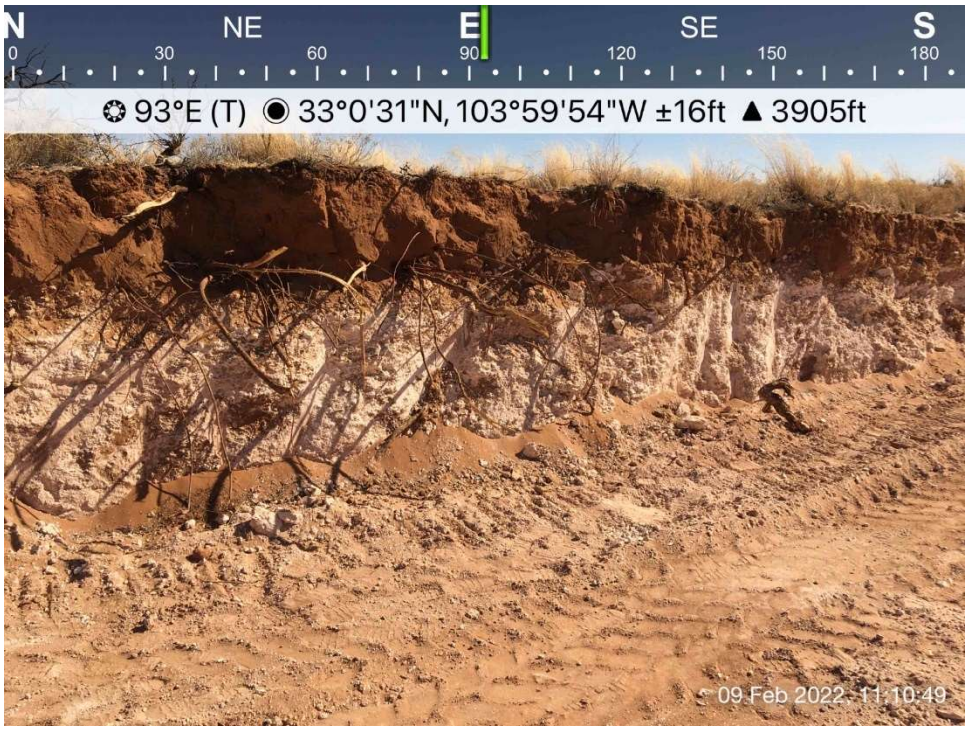
Further excavated sidewalls in the northern section of the spill area, viewing to the west.

Further excavated sidewalls in the northern section of the spill area, viewing to the north.

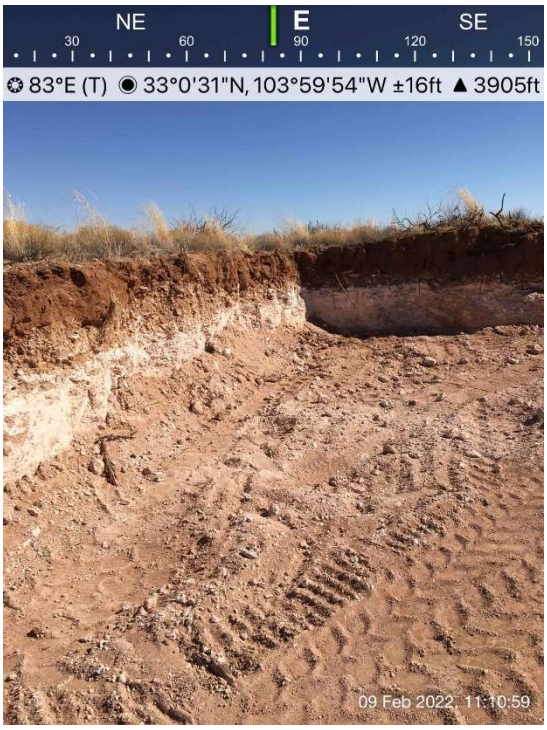
Further excavated sidewalls in the northern section of the spill area, viewing to the north.



Further excavated sidewalls in the northern section of the spill area, viewing to the north.

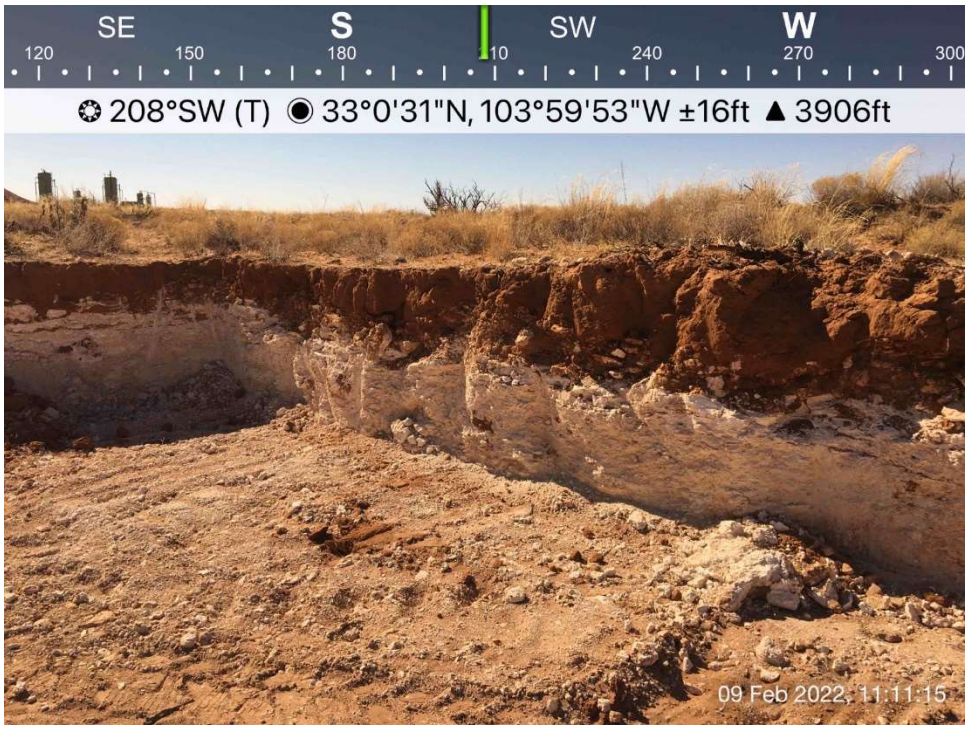


Further excavated sidewalls in the northern section of the spill area, viewing to the east.

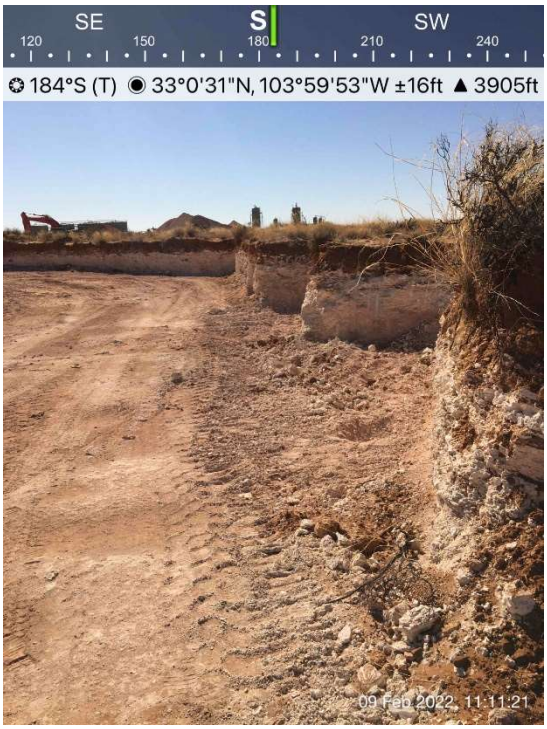


Further excavated sidewalls in the northern section of the spill area, viewing to the east.

Further excavated sidewalls in the northern section of the spill area, viewing to the west.



Further excavated sidewalls in the northern section of the spill area, viewing to the southwest.



Further excavated sidewalls in the northern section of the spill area, viewing to the south.

Further excavated sidewalls in the northern section of the spill area, viewing to the east.

Further excavated sidewalls in the northern section of the spill area, viewing to the northeast.

Further excavated sidewalls in the northern section of the spill area, viewing to the southwest.

Further excavated sidewalls in the northern section of the spill area, viewing to the south.

Further excavated sidewalls in the northern section of the spill area, viewing to the northeast.

Further excavated sidewalls in the central section of the spill area, viewing to the south.

Further excavated sidewalls in the southern section of the spill area, viewing to the northwest.

Further excavated sidewalls in the central section of the spill area, viewing to the northeast.

Further excavated sidewalls in the central section of the spill area, viewing to the east.

Further excavated sidewalls in the central section of the spill area, viewing to the southeast.

Further excavated sidewalls in the southern section of the spill area, viewing to the southeast.

Further excavated sidewalls in the southern section of the spill area, viewing to the southeast.

Further excavated sidewalls in the southern section of the spill area, viewing to the southwest.

Further excavated sidewalls in the southern section of the spill area, viewing to the north.

Further excavated area in the southern section of the spill area, viewing to the north.

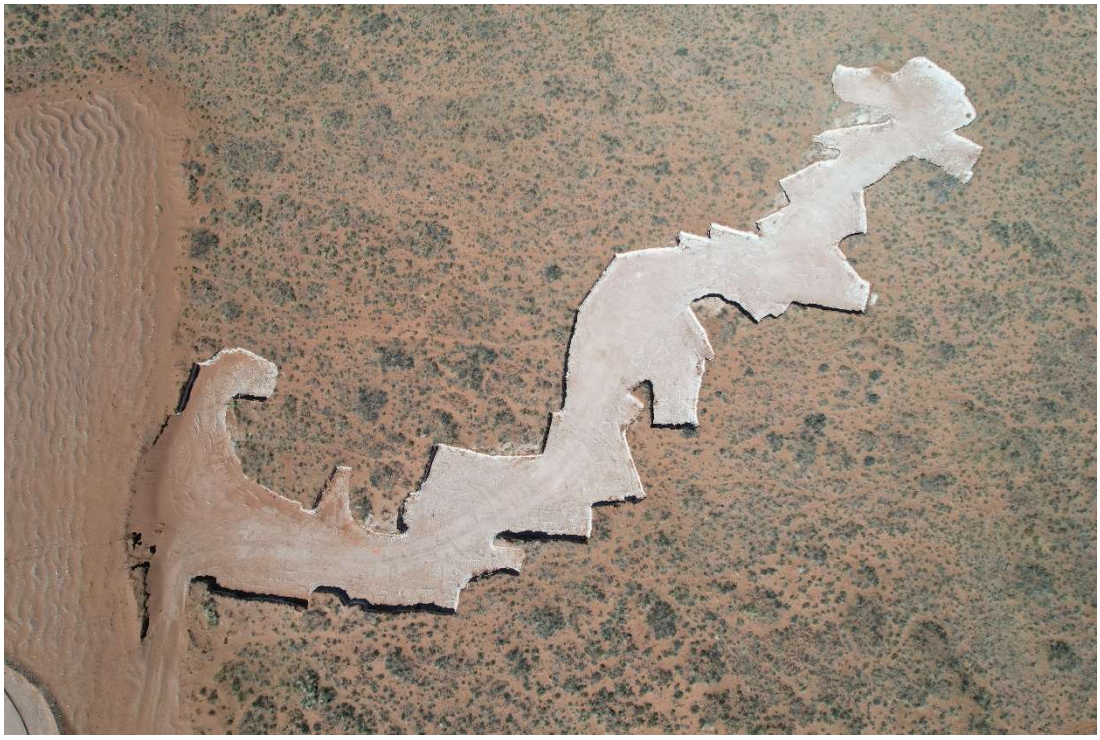
Further excavated area in the southern section of the spill area, viewing to the northwest.

Further excavated sidewalls in the southern section of the spill area, viewing to the southwest.

Drone imagery of excavated area on March 24, 2022, viewing to the northwest.
Coordinates: 33° 0’ 27.65” N, 103° 59’ 51.29” W

Drone imagery of excavated area on March 24, 2022, viewing to the south.
Coordinates: 33° 0’ 56.26” N, 103° 59’ 56.26” W

Drone imagery of excavated area on March 24, 2022, viewing to the east.
Coordinates: 33° 0’ 27.83” N, 103° 59’ 56.67” W



Drone imagery of excavated area on March 24, 2022. Viewing directly above the excavation.
Coordinates: 33° 0’ 29.77” N, 103° 59’ 52.14” W

Backfilled excavation in northern section of the spill area, viewing to the southeast.

Backfilled excavation in northern section of the spill area, viewing to the southwest.

Backfilled excavation in northern section of the spill area, viewing to the east.

Backfilled excavation in northern section of the spill area, viewing to the southeast.

Backfilled excavation in northern section of the spill area, viewing to the south.

Backfilled excavation in northern section of the spill area, viewing to the southeast.

Backfilled excavation in northern section of the spill area, viewing to the southeast.

Backfilled excavation in northern section of the spill area, viewing to the east.

Backfilled excavation in northern section of the spill area, viewing to the south.

Backfilled excavation in northern section of the spill area, viewing to the south.

Backfilled excavation in northern section of the spill area, viewing to the southeast.

Backfilled excavation in northern section of the spill area, viewing to the east.

Backfilled excavation in central section of the spill area, viewing to the southeast.

Backfilled excavation in central section of the spill area, viewing to the east.

Backfilled excavation in central section of the spill area, viewing to the south.

Backfilled excavation in southern section of the spill area, viewing to the northwest.

Backfilled excavation in southern section of the spill area, viewing to the east.

Backfilled excavation in southern section of the spill area, viewing to the southeast.

Backfilled excavation in southern section of the spill area, viewing to the south.

Backfilled excavation in southern section of the spill area, viewing to the southwest.

Backfilled excavation in southern section of the spill area, viewing to the east.

Backfilled excavation in southern section of the spill area, viewing to the northwest.

Backfilled excavation in southern section of the spill area, viewing to the south.

Backfilled excavation in southern section of the spill area, viewing to the east.

Backfilled excavation in southern section of the spill area, viewing to the southeast.

Backfilled excavation in southern section of the spill area, viewing to the northwest.

Backfilled excavation in southern section of the spill area, viewing to the south.

Backfilled excavation in southern section of the spill area, viewing to the southwest.

Backfilled excavation in southern section of the spill area, viewing to the southeast.

Backfilled excavation in southern section of the spill area, viewing to the west.

Backfilled excavation in southern section of the spill area, viewing to the north.

Backfilled excavation in southern section of the spill area, viewing to the west.

Backfilled excavation in southern section of the spill area, viewing to the east.

Backfilled excavation in southern section of the spill area, viewing to the north.

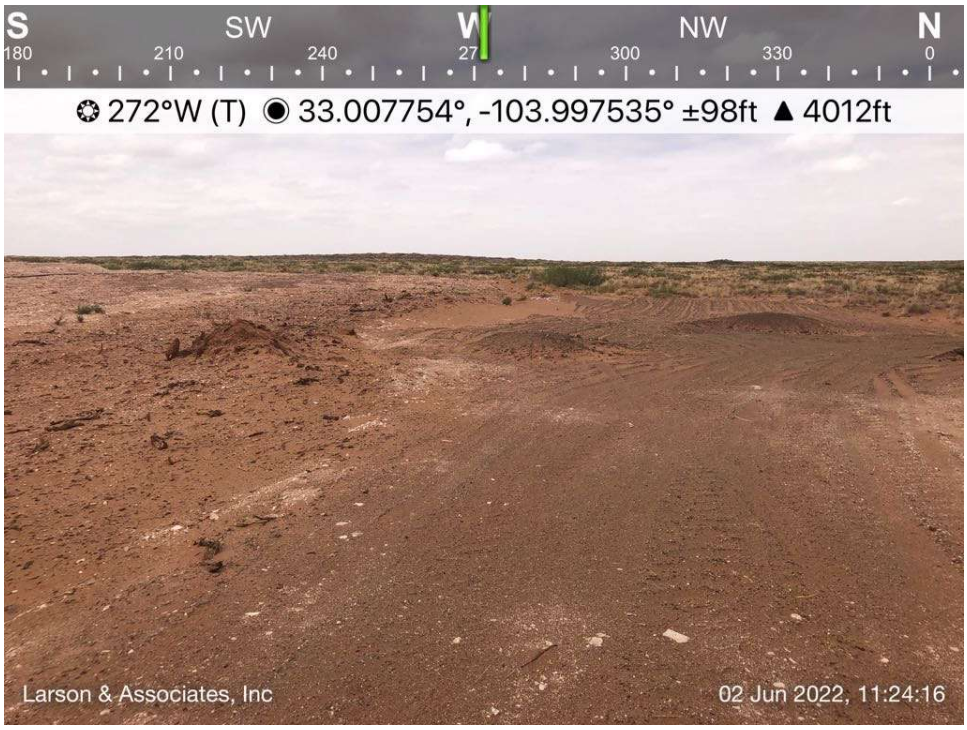
Drone imagery of backfilled excavation on April 29, 2022, viewing to the south.
Coordinates: 33° 0’ 33.47’ N, 103° 53.59 W

Drone imagery of backfilled excavation on April 29, 2022, viewing to the south.
Coordinates: 33° 0’ 36.41” N, 103° 59’ 53.94” W

Drone imagery of backfilled excavation on April 29, 2022, viewing to the north.
Coordinates: 33° 0’ 22.11” N, 103° 59’ 53.54” W

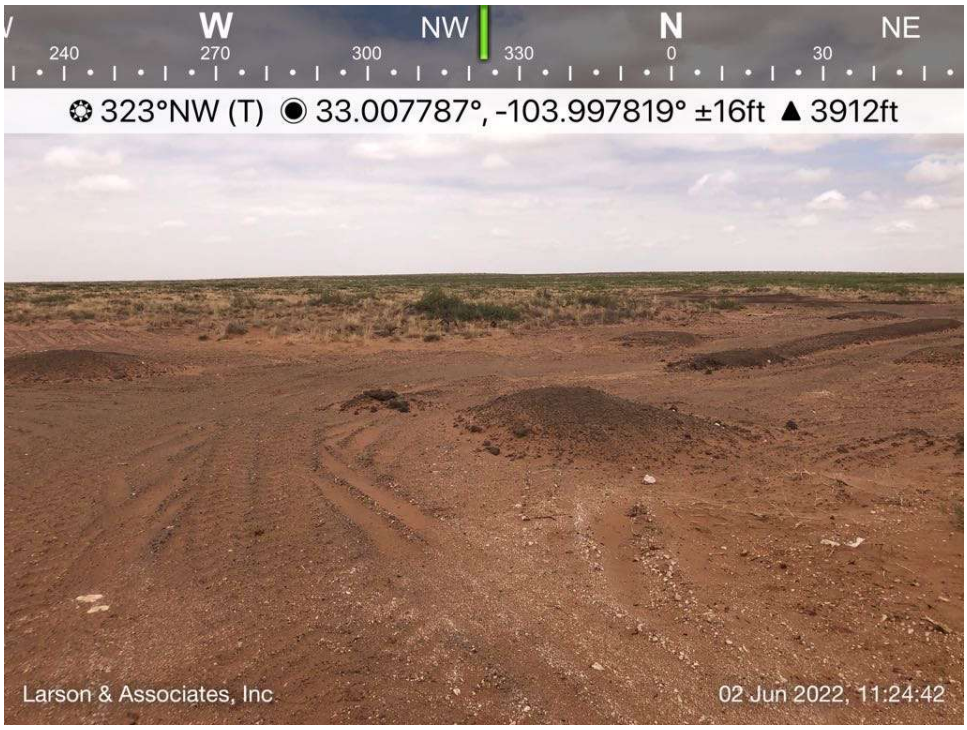
Drone imagery of backfilled excavation on April 29, 2022, viewing to the northeast.
Coordinates: 33° 0’ 23.62” N, 103° 59’ 57.15 W

Drone imagery of backfilled excavation on April 29, 2022, viewing to the southeast.
Coordinates: 33° 0’ 33.10° 0” N, 103° 59’ 57.15” W

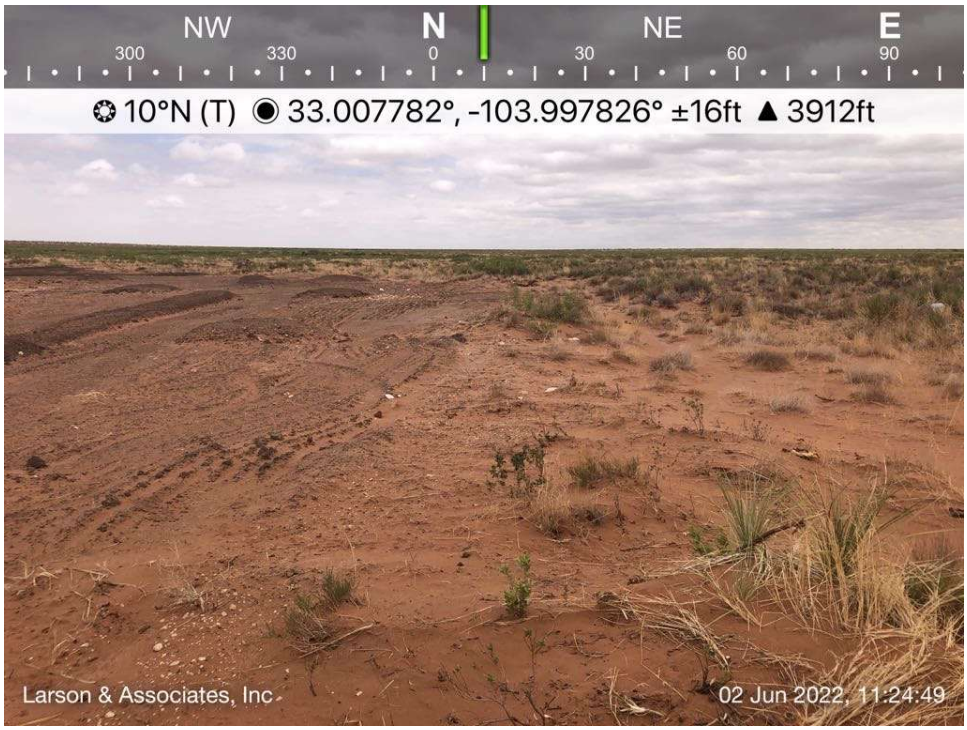


Contoured and seeded area over backfilled excavation, viewing to the west.

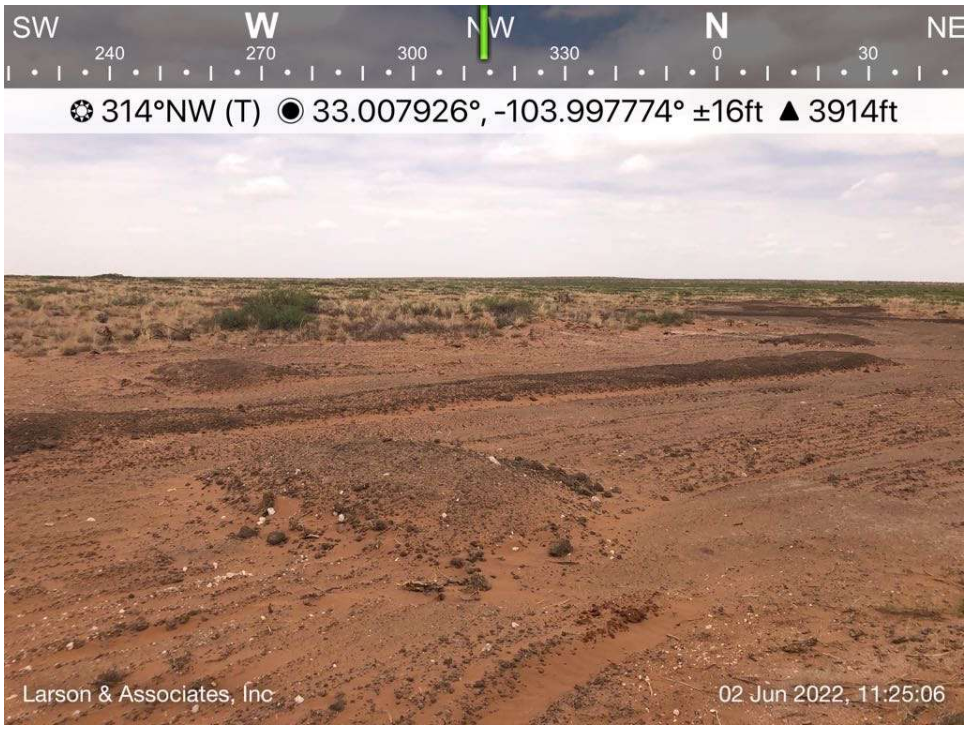
Contoured and seeded area over backfilled excavation, viewing to the north.



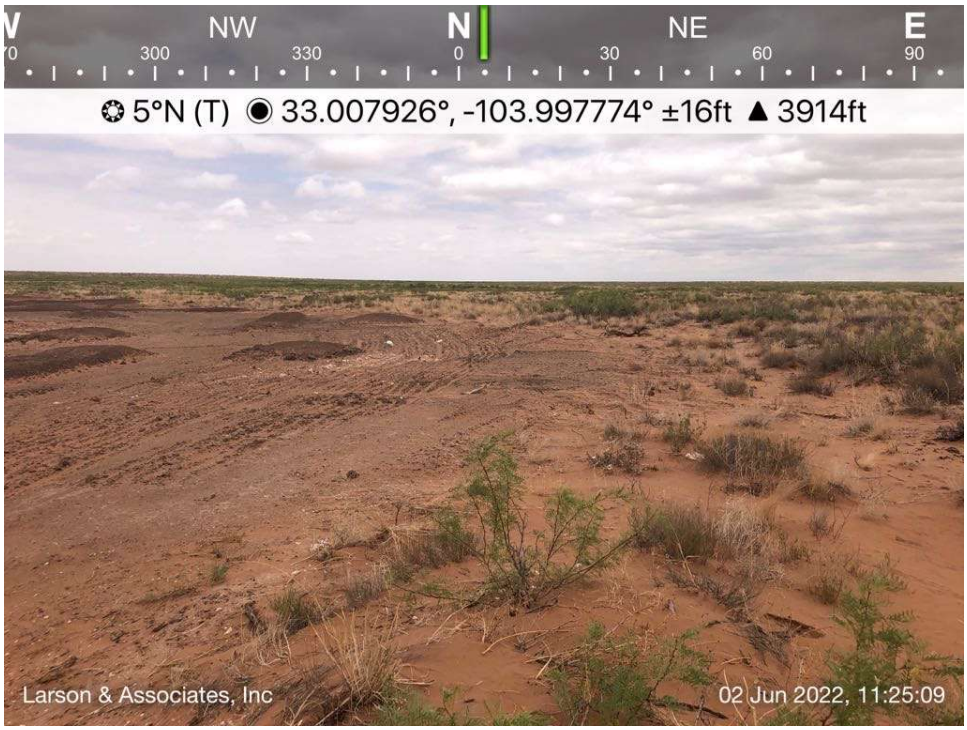
Contoured and seeded area over backfilled excavation, viewing to the northwest.



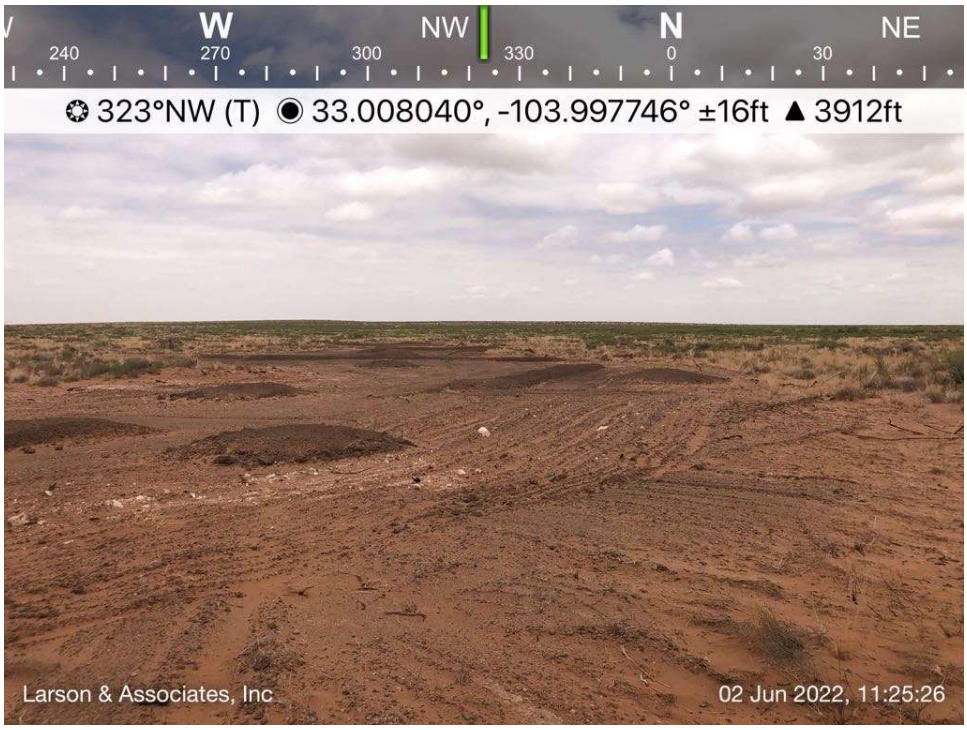
Contoured and seeded area over backfilled excavation, viewing to the north.



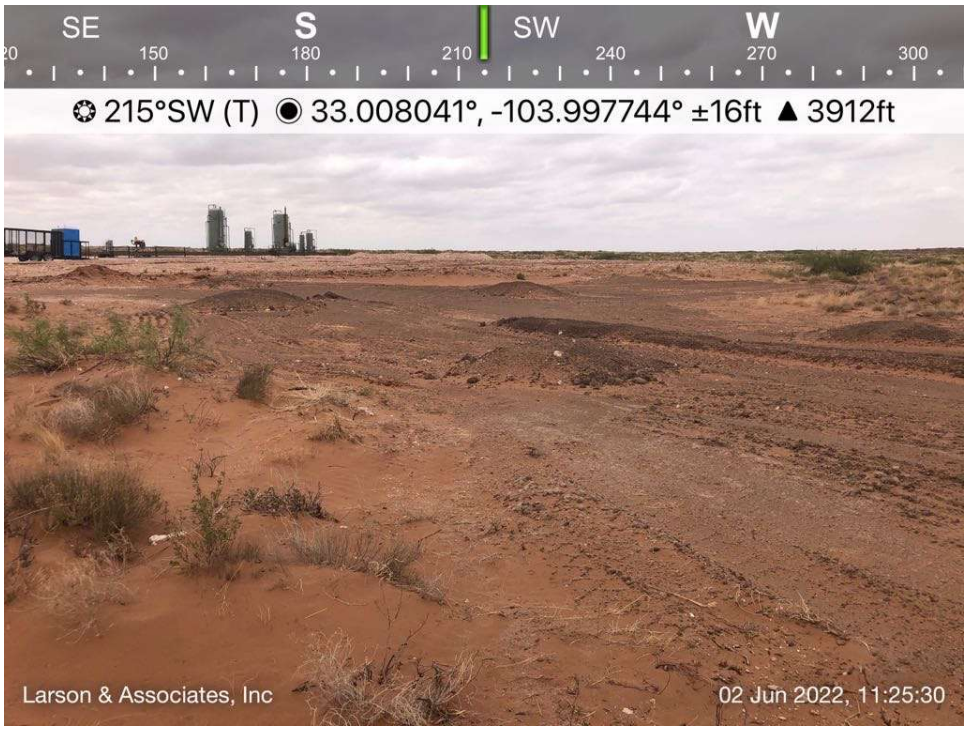
Contoured and seeded area over backfilled excavation, viewing to the northwest.



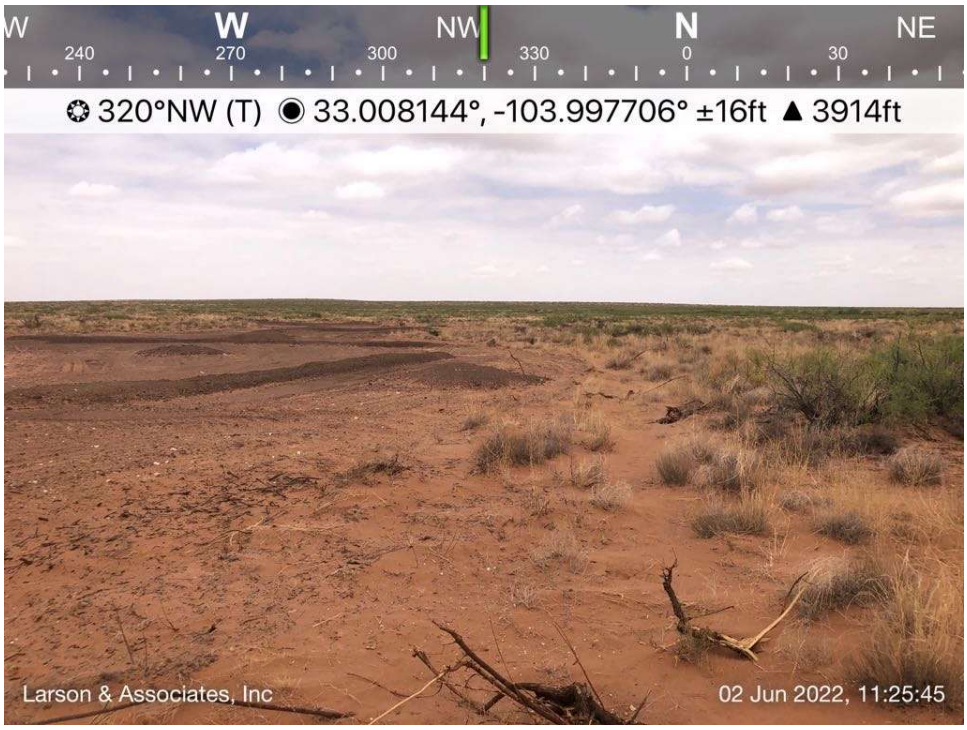
Contoured and seeded area over backfilled excavation, viewing to the north.



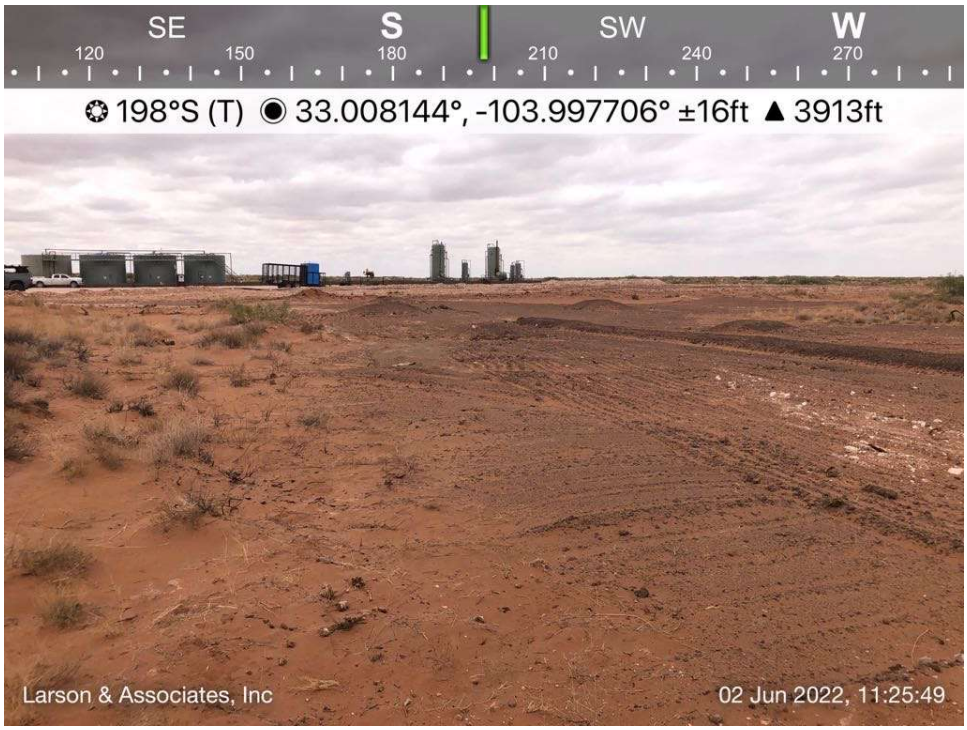
Contoured and seeded area over backfilled excavation, viewing to the northwest.



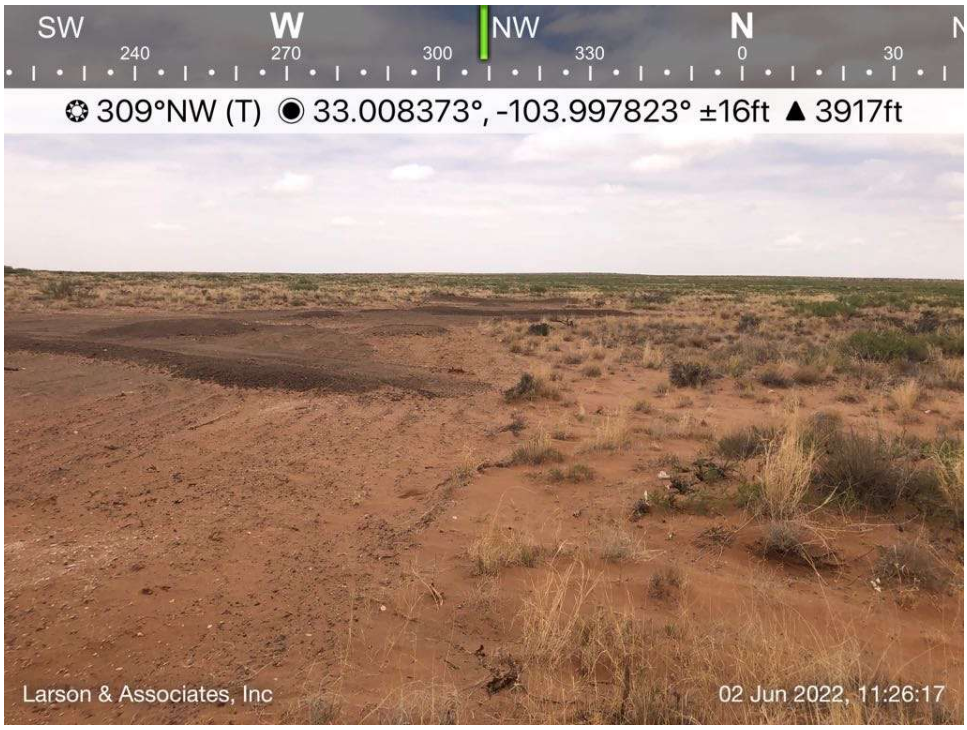
Contoured and seeded area over backfilled excavation, viewing to the southwest.



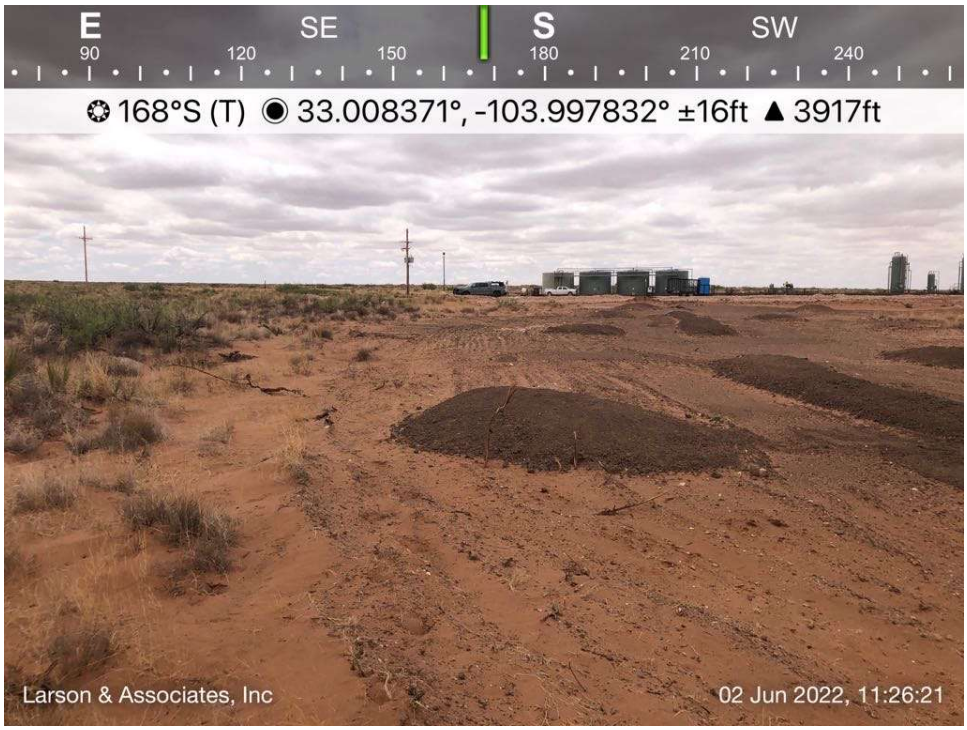
Contoured and seeded area over backfilled excavation, viewing to the northwest.



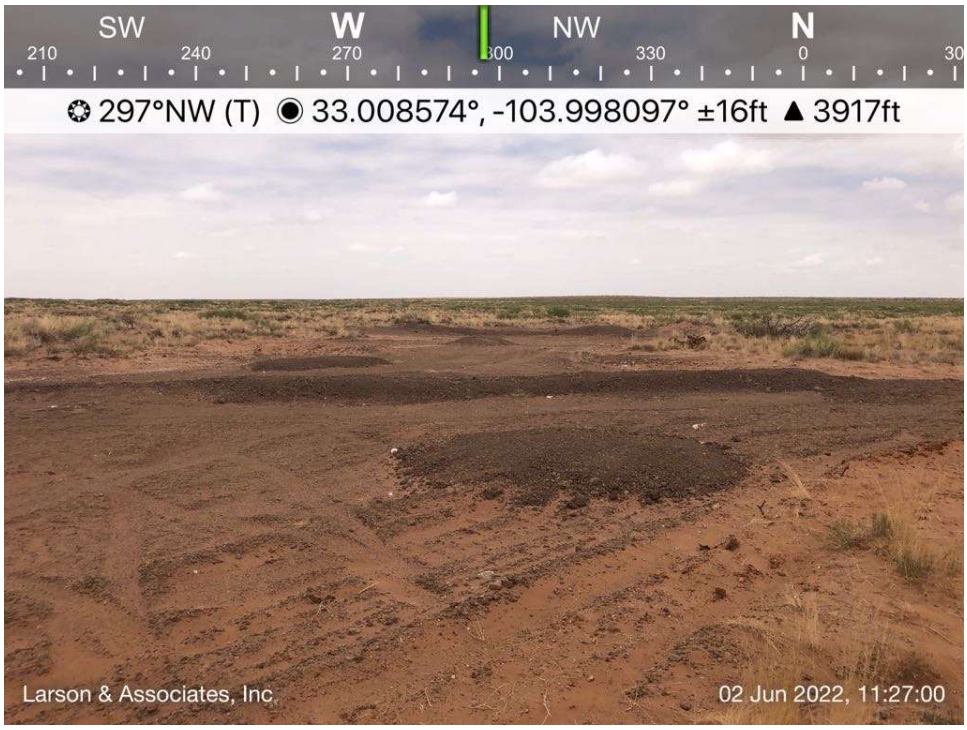
Contoured and seeded area over backfilled excavation, viewing to the south.



Contoured and seeded area over backfilled excavation, viewing to the northwest.



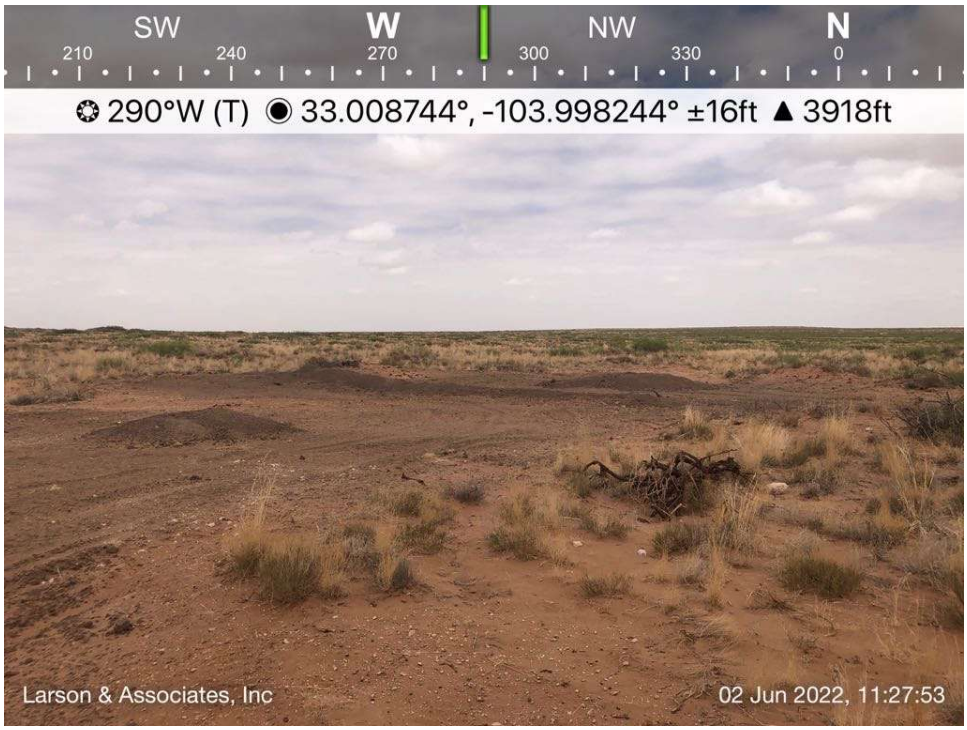
Contoured and seeded area over backfilled excavation, viewing to the south.



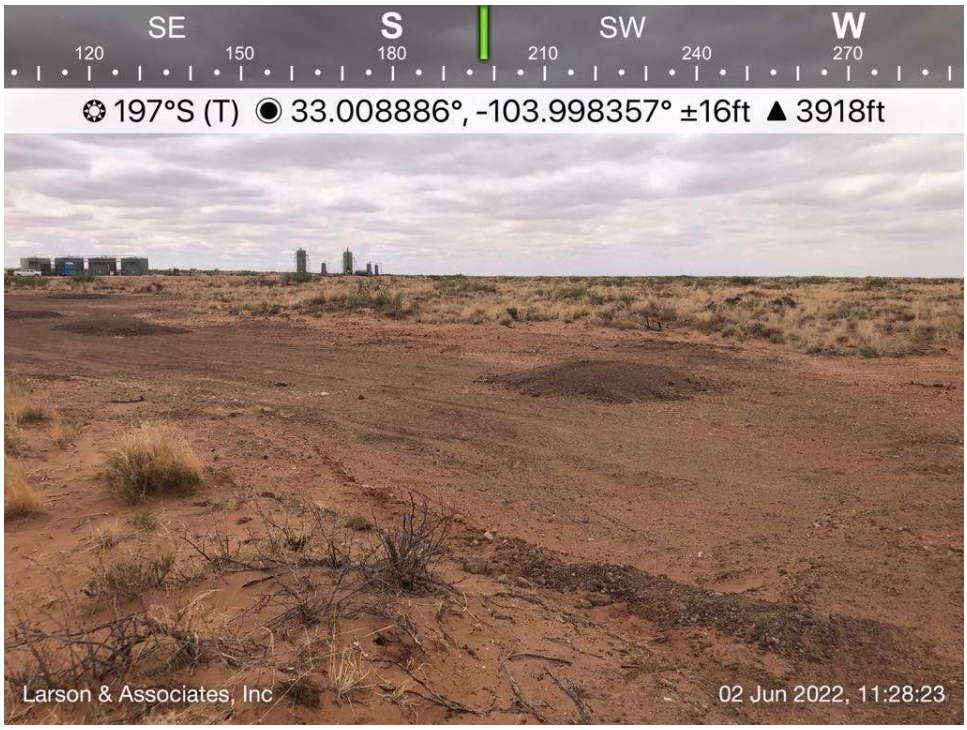
Contoured and seeded area over backfilled excavation, viewing to the northwest.

Contoured and seeded area over backfilled excavation, viewing to the southeast.

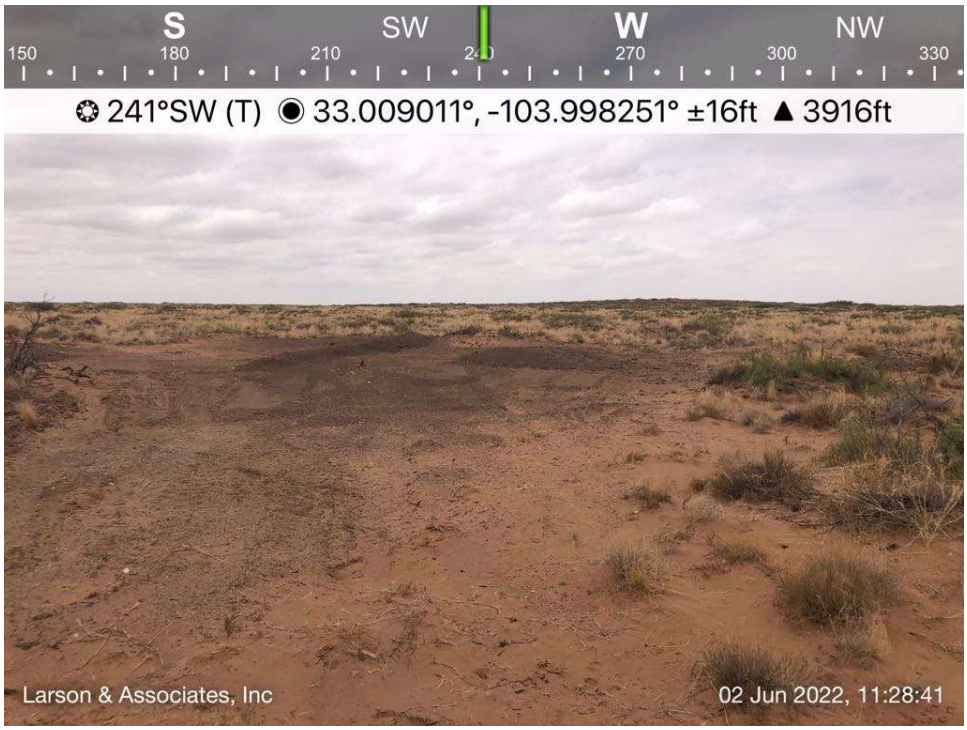
Contoured and seeded area over backfilled excavation, viewing to the south.



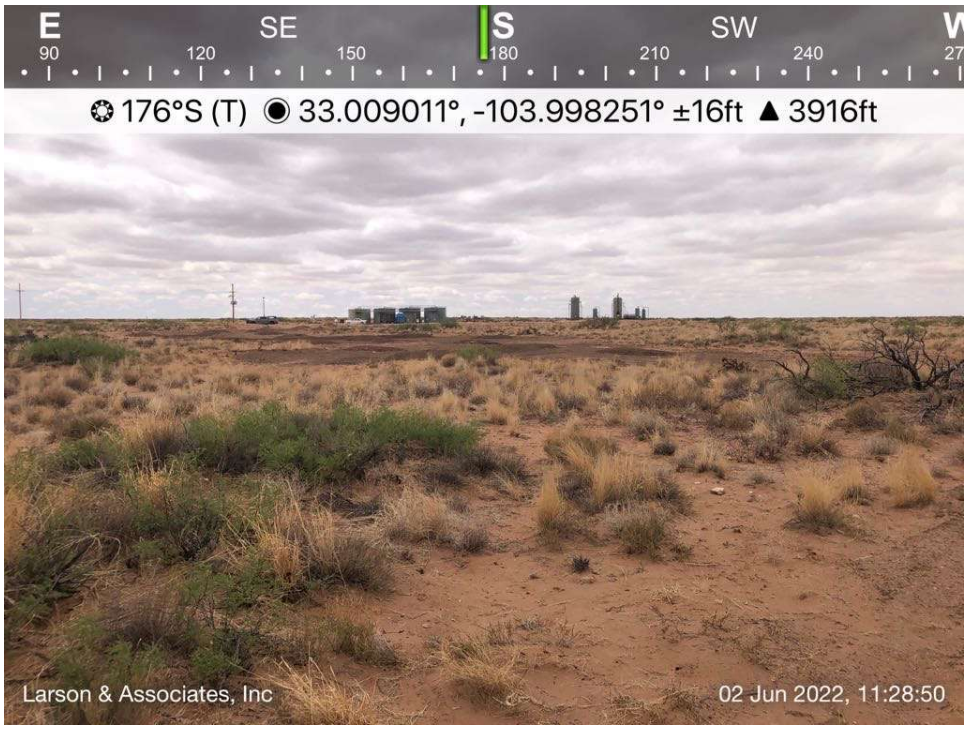
Contoured and seeded area over backfilled excavation, viewing to the northwest.



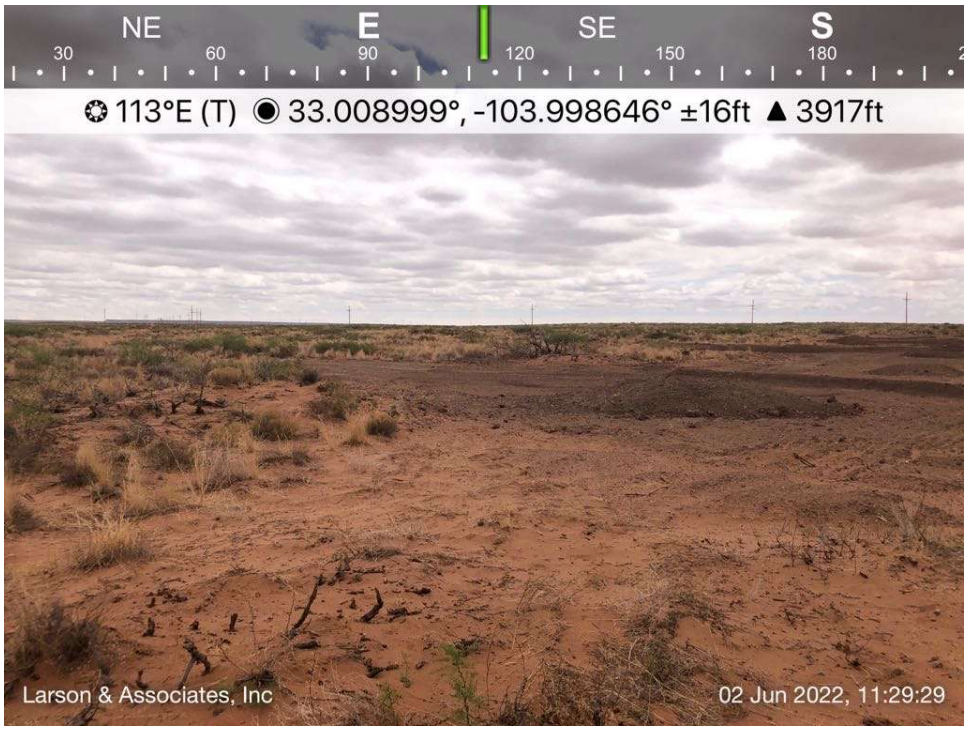
Contoured and seeded area over backfilled excavation, viewing to the south.



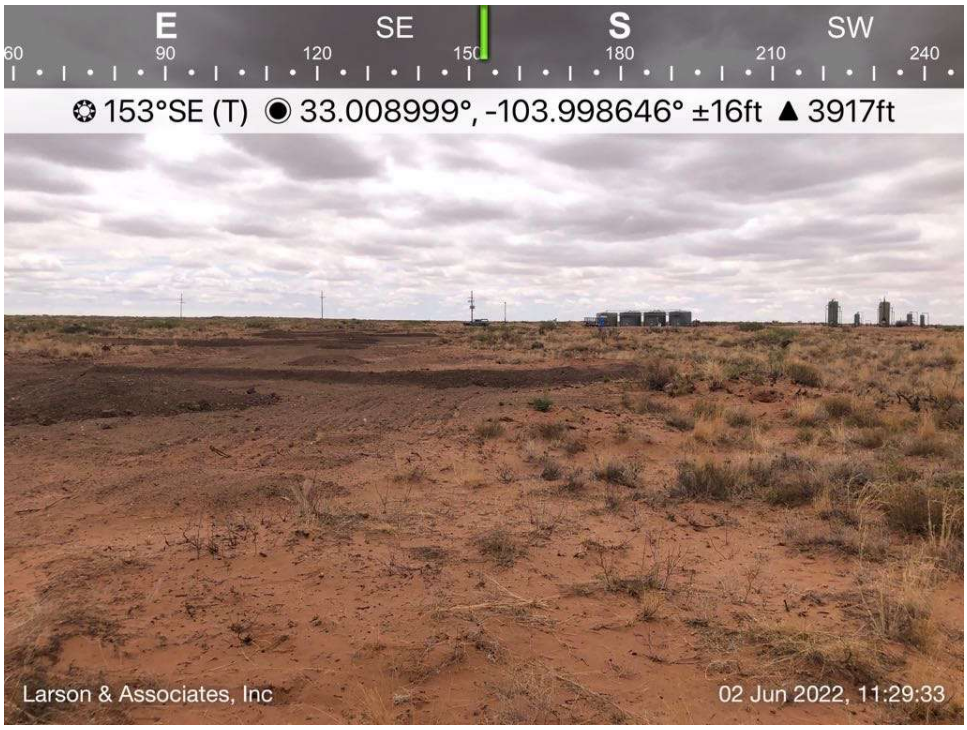
Contoured and seeded area over backfilled excavation, viewing to the southwest.



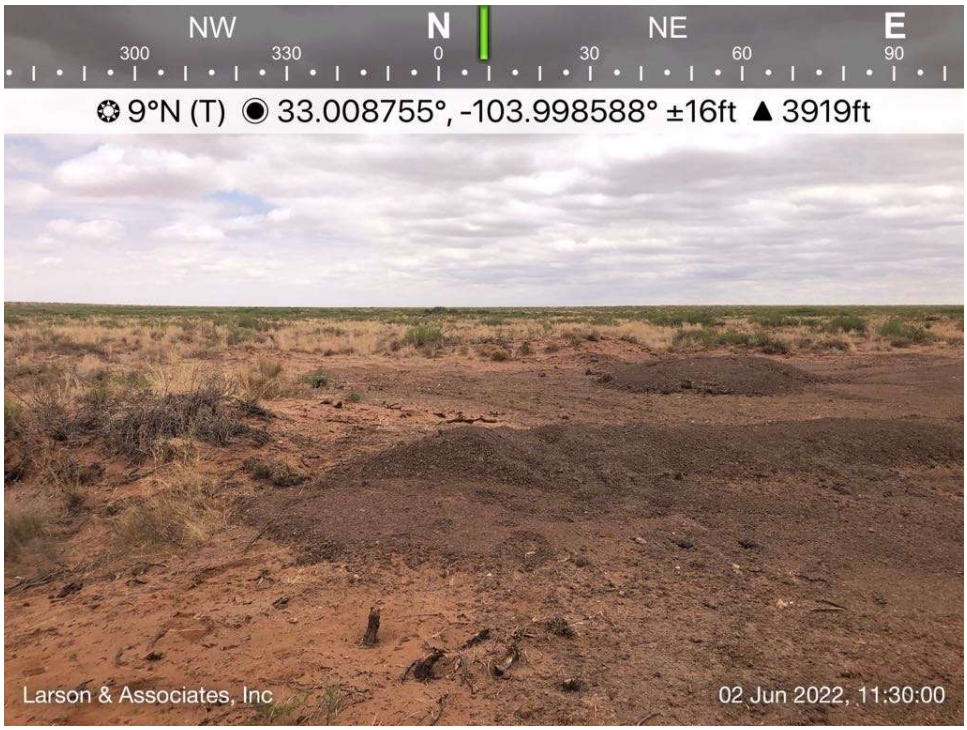
Contoured and seeded area over backfilled excavation, viewing to the south.



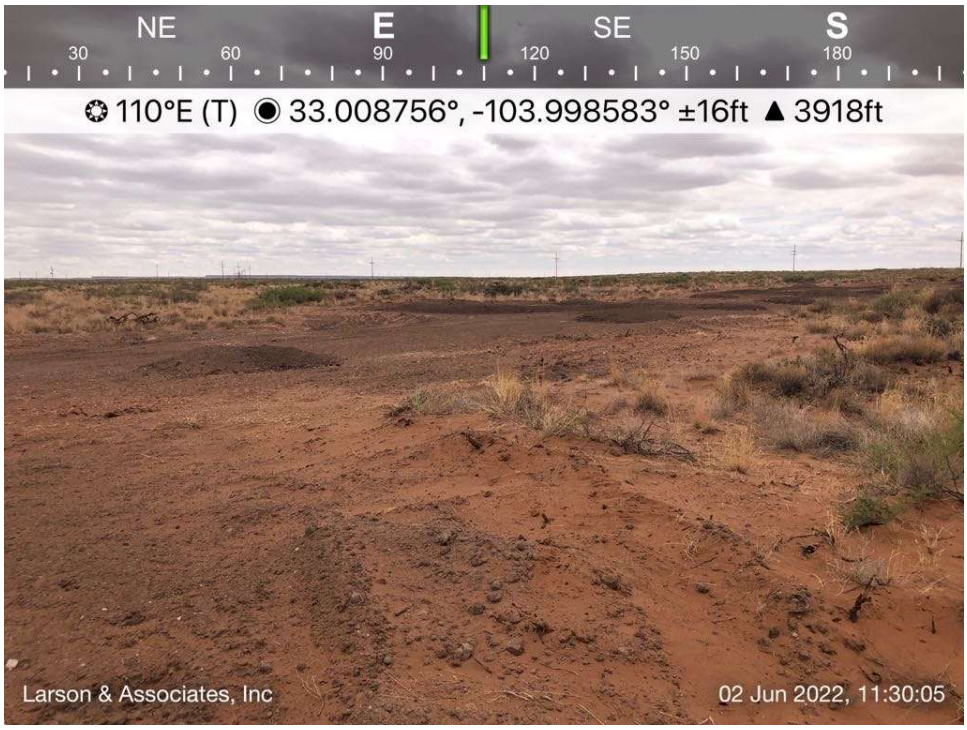
Contoured and seeded area over backfilled excavation, viewing to the east.



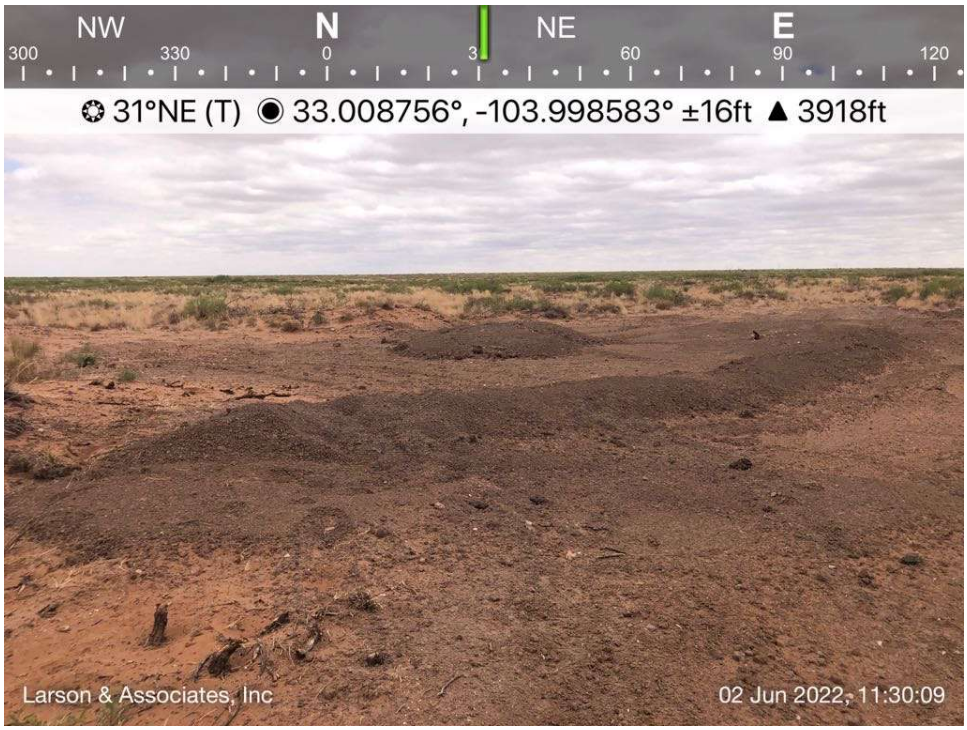
Contoured and seeded area over backfilled excavation, viewing to the southeast.



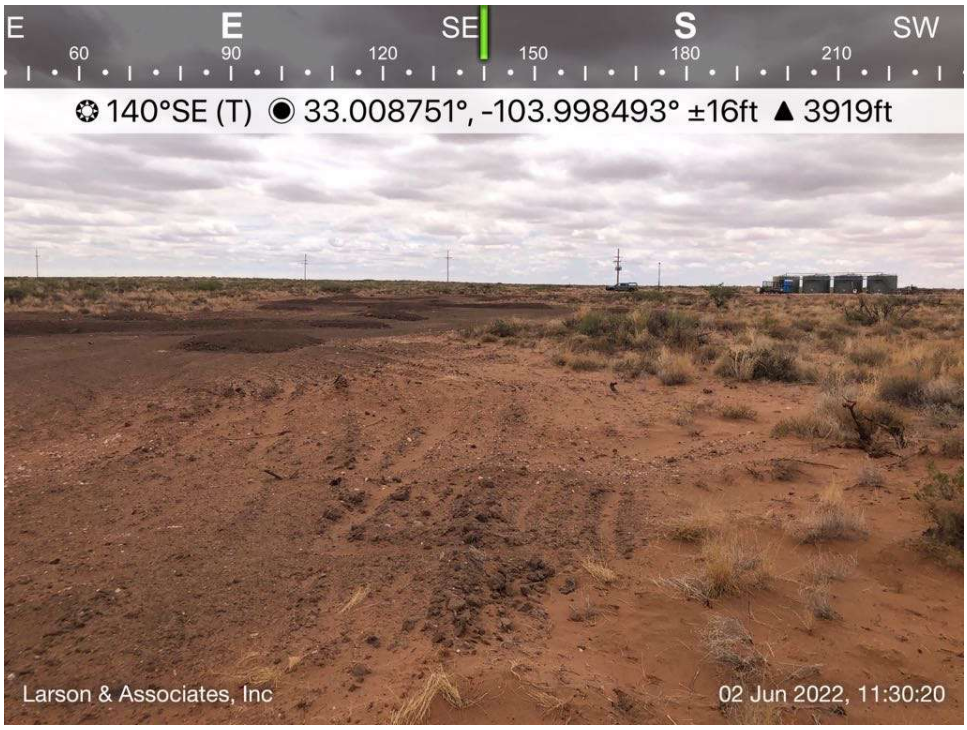
Contoured and seeded area over backfilled excavation, viewing to the north.



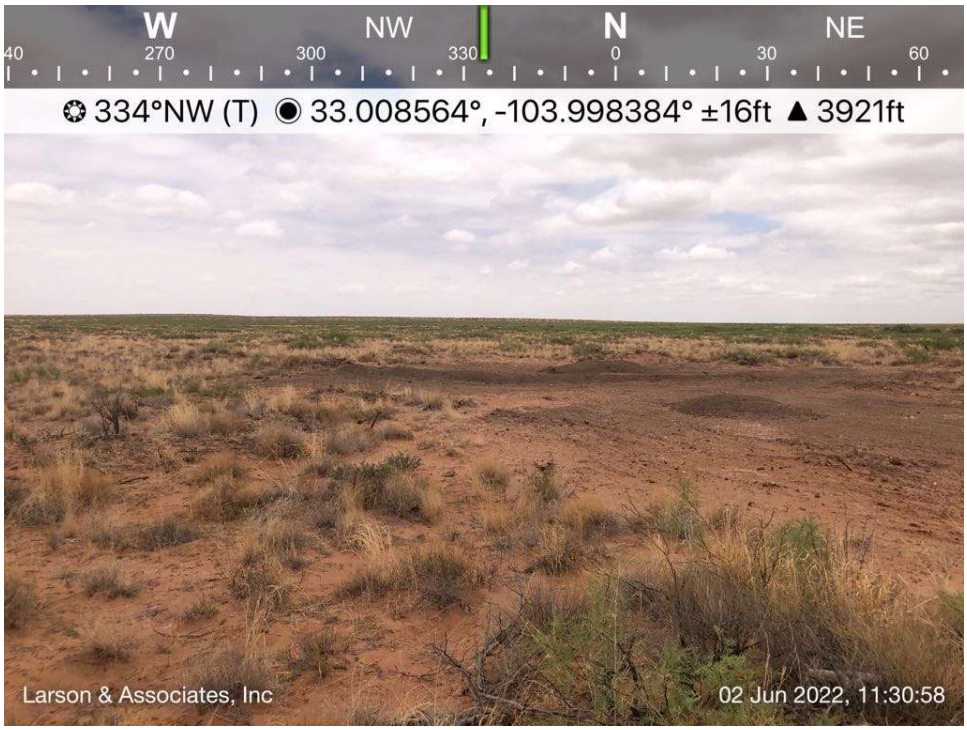
Contoured and seeded area over backfilled excavation, viewing to the east.



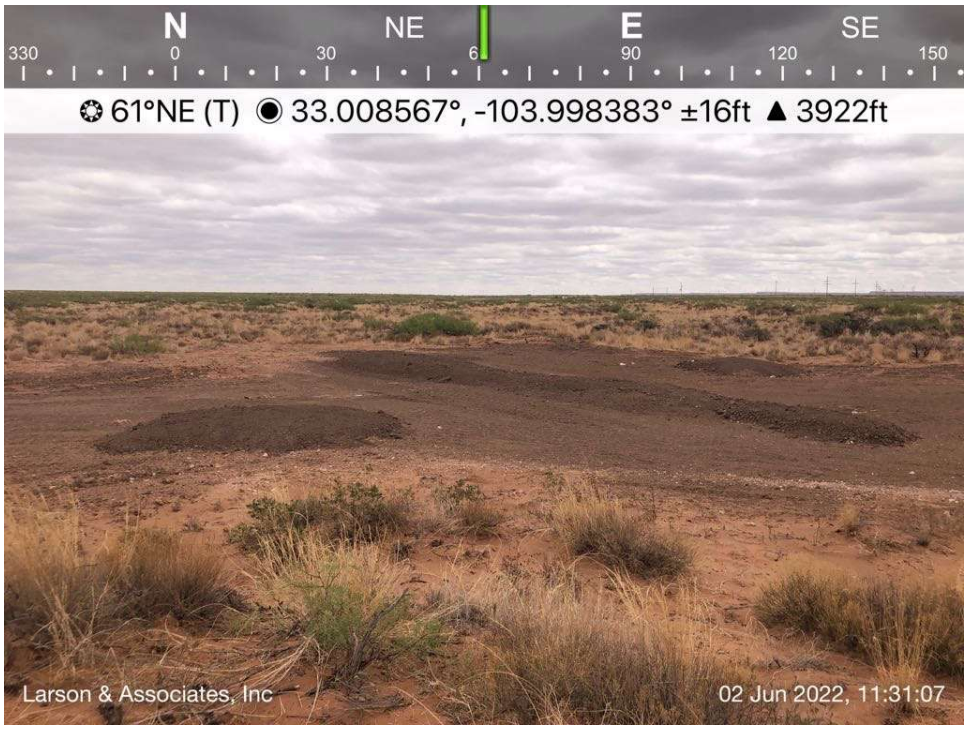
Contoured and seeded area over backfilled excavation, viewing to the northeast.



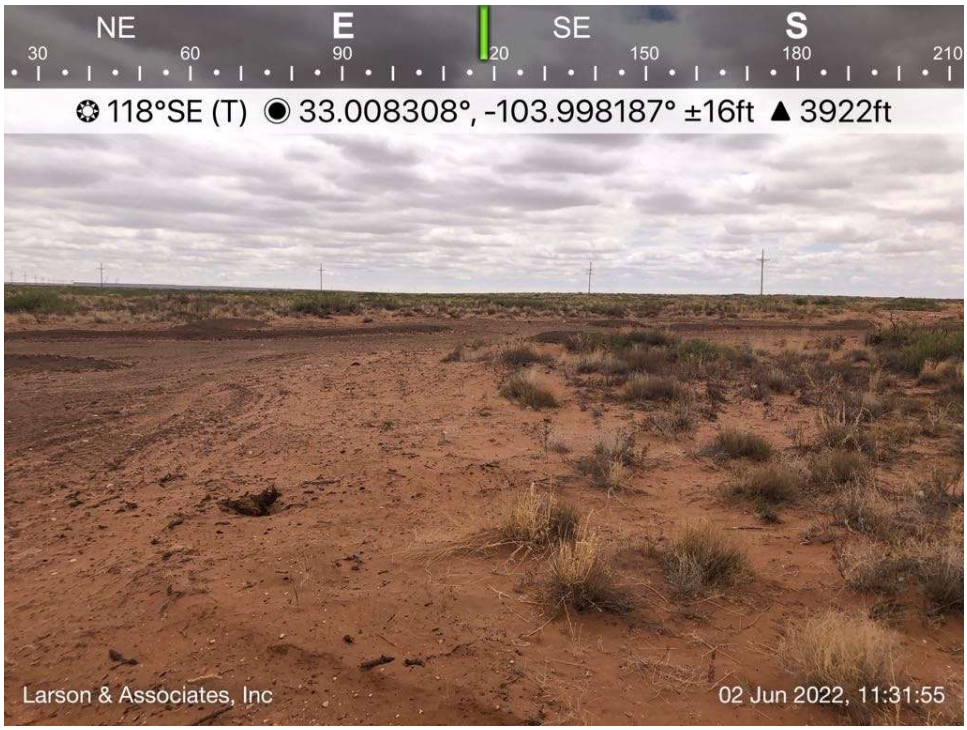
Contoured and seeded area over backfilled excavation, viewing to the southeast.



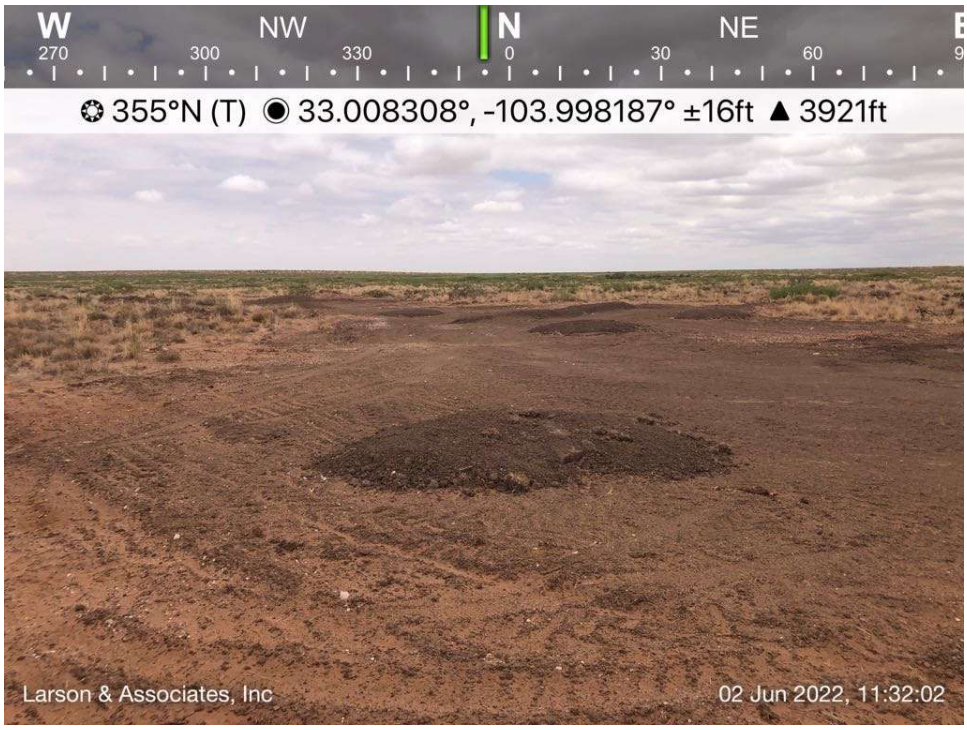
Contoured and seeded area over backfilled excavation, viewing to the northwest.



Contoured and seeded area over backfilled excavation, viewing to the northeast.

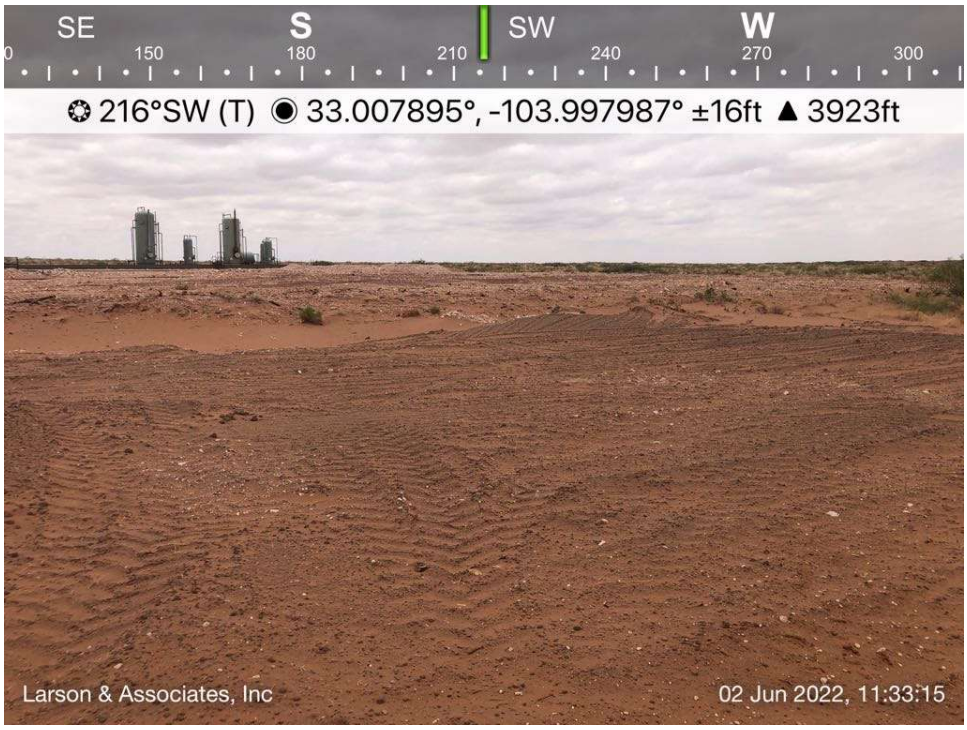


Contoured and seeded area over backfilled excavation, viewing to the southeast.

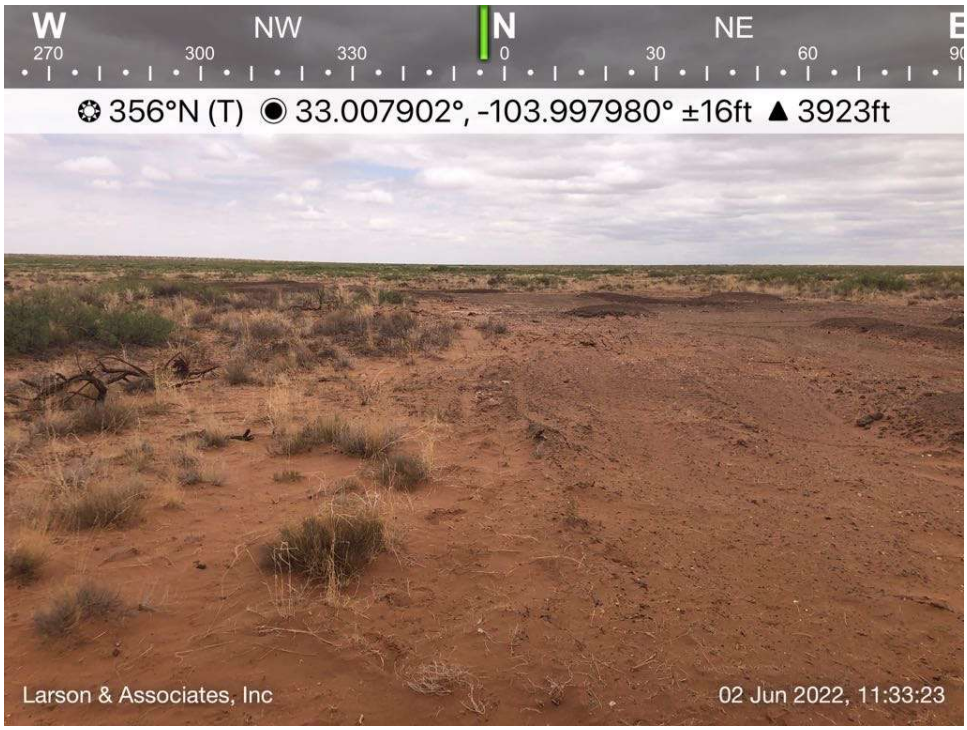


Contoured and seeded area over backfilled excavation, viewing to the north.

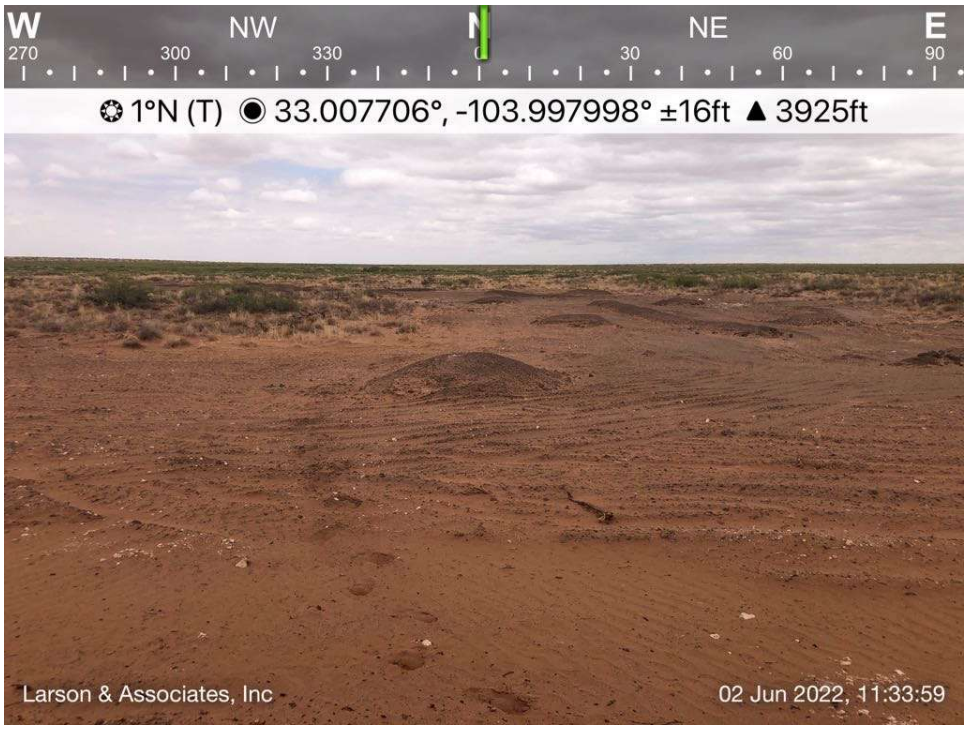
Contoured and seeded area over backfilled excavation, viewing to the south.



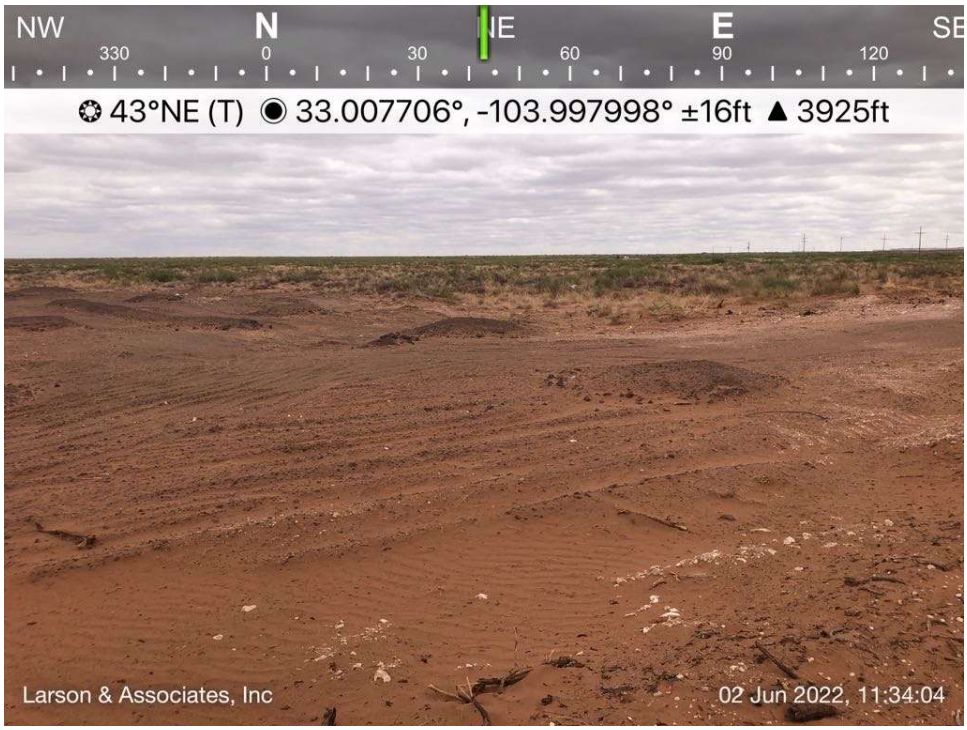
Contoured and seeded area over backfilled excavation, viewing to the southwest.



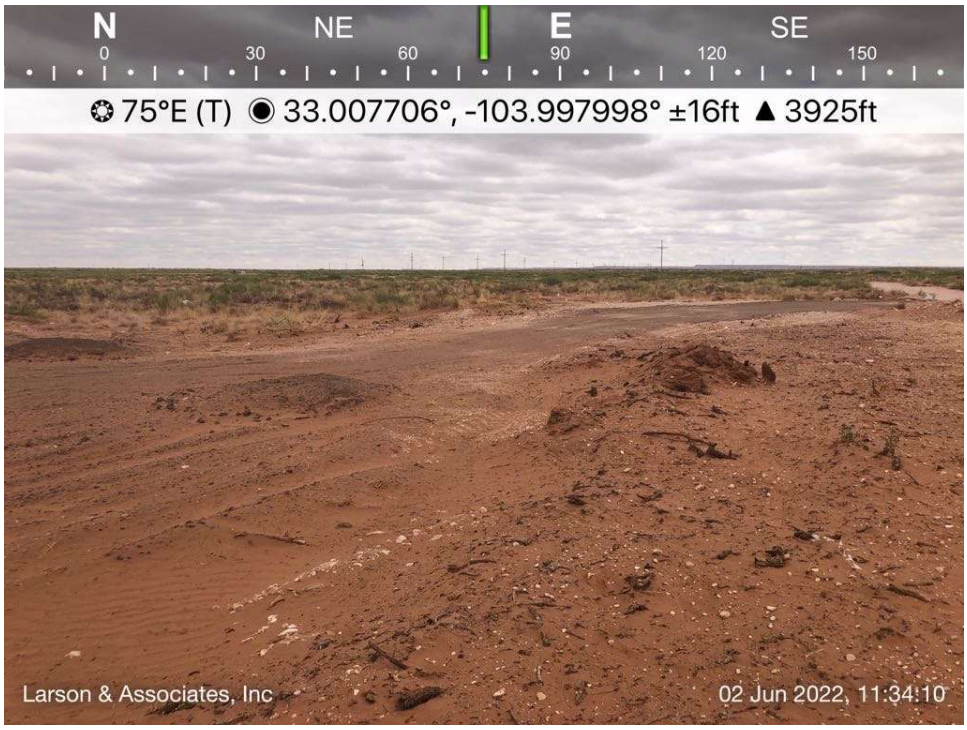
Contoured and seeded area over backfilled excavation, viewing to the north.



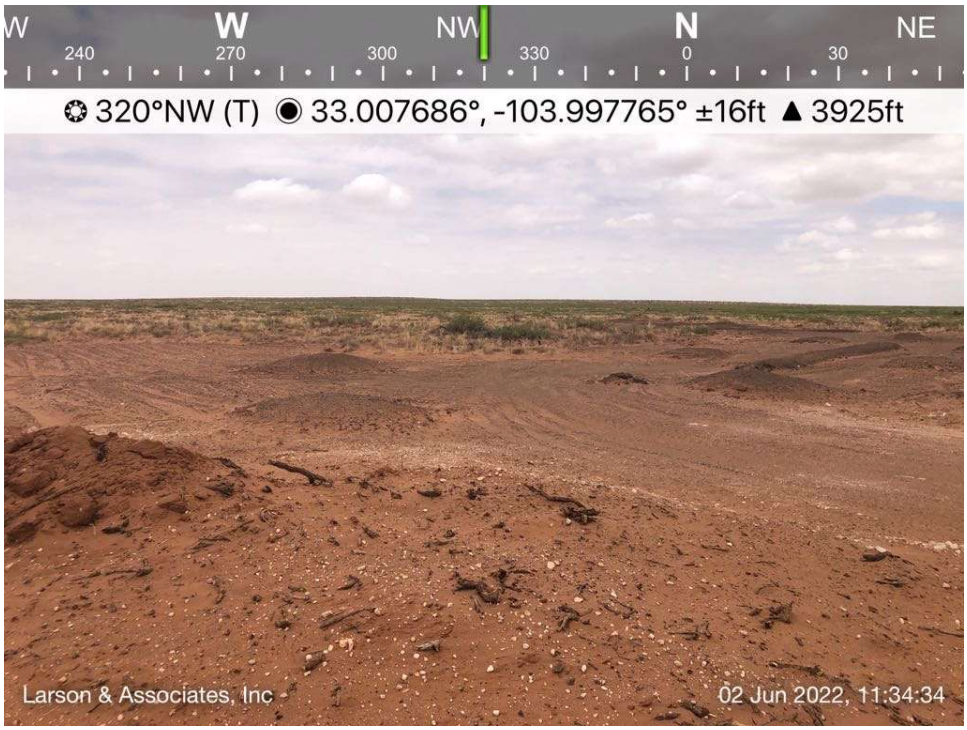
Contoured and seeded area over backfilled excavation, viewing to the north.



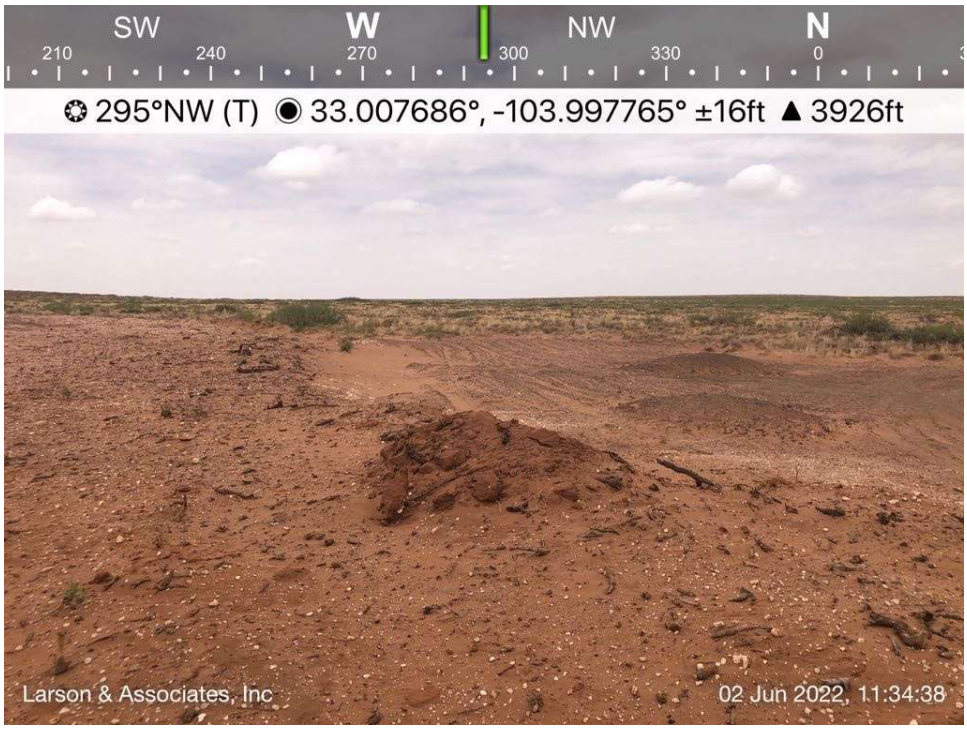
Contoured and seeded area over backfilled excavation, viewing to the northeast.



Contoured and seeded area over backfilled excavation, viewing to the east.



Contoured and seeded area over backfilled excavation, viewing to the northwest.



Contoured and seeded area over backfilled excavation, viewing to the northwest.

Drone imagery of contoured and seeded excavation, on June 2, 2022, viewing directly above the excavation. Coordinates: 33° 0' 29.29" N, 103° 59' 52.65" W

Drone imagery of contoured and seeded excavation, on June 2, 2022, viewing to the north.
Coordinates: 33° 0' 27.47" N, 103° 59' 52.19" W

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

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

CONDITIONS

Action 66912

CONDITIONS

Operator: SELECT ENERGY SERVICES, LLC PO Box 1715 Gainesville, TX 76240	OGRID: 289068
	Action Number: 66912
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2116660324 MACK ENERGY FRAC LINE, thank you. This closure is approved. For future reference, many of the Chain of Custody and Analysis Request forms showed samples not received at proper temperature of 6 deg. Celsius or below. If samples are improperly cared for again on future remediation projects, the report will be immediately denied.	6/17/2022