GOLDER
MEMBER OF WSP

September 3, 2021 Project No. 20144747

Maureen Hatfield

VCP-CA Section, Team 1, Remediation Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC-127
Austin, Texas 78711-3087

RESPONSE TO TCEQ COMMENT LETTER DATED AUGUST 10, 2021: COMMENTS ON ENGELWOOD YARD – NORTH BYPASS SOIL MANAGEMENT PLAN (SMP) DATED APRIL 12, 2021; AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP), UNION PACIFIC RAILROAD (UPRR)
HOUSTON WOOD PRESERVING WORKS FACILITY
4910 LIBERTY ROAD FACILITY, HOUSTON, TEXAS
CN600131098; RN100674613; EPA ID NO. TXD000820266
POST-CLOSURE CARE PERMIT NO. HW-50343; INDUSTRIAL SWR NO. 31547

Dear Ms. Hatfield:

Golder Associates Inc. (Golder), a member of WSP, on behalf of Union Pacific Railroad Company (UPRR), prepared this response to the Texas Commission on Environmental Quality (TCEQ) letter dated August 10, 2021 regarding the construction support plans for the UPRR Engineering Englewood Yard - North Bypass Project (the Project Area) located in Houston, Texas that includes a portion of the Houston Wood Preserving Works site (the Site).

The TCEQ issued a comment letter dated August 10, 2021, detailing TCEQ's review and the requested revisions to the Stormwater Pollution Prevention Plan (SWPPP) and the Soil Management Plan (SMP). In addition, these comments were discussed during the August 12, 2021 telephone call between the TCEQ, UPRR, and Golder. The TCEQ comments (in italic) and UPRR responses (including requested revisions from the August 12, 2021 telephone call which supersede the comments in the August 10, 2021 TCEQ letter) are provided below:

TCEQ Comment Status of the SMP:

UPRR submitted "contained-in" determination to the TCEQ on May 3, 2021 for soils excavated during the Englewood North Rail Bypass project that likely contain listed hazardous waste K001 and F034. The TCEQ did not approve UPRR's "contained-in" determination as outlined in the letter dated July 1, 2021. In addition, the SMP failed to identify or manage hot spot areas as part of the in-situ soil characterization. Furthermore, in the SMP, UPRR stated that, based on visual field observations, contamination is anticipated during excavation. Please revise the SWPPP and SMP to address the following comments:

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Response to Comment Status of the SMP:

UPRR submitted a retraction letter dated August 19, 2021 for the "contained-in" determination request for soils from the Site to be generated as part the Project. In addition, the attached updated SMP dated September 3, 2021 has been revised to include management of impacted soil hotspots (e.g., heavily stained or NAPL saturated soils) not previously identified, if encountered during construction activities. The management of previously unknown hotspots, if encountered, is provided on page 10 of the updated SMP dated September 3, 2021.

TCEQ General Comments No. 1 and 2:

1. *UPRR shall ensure that adequate stormwater protection and soil management activities are implemented in accordance with the final versions of the SWPP and SMP at all times during excavation and construction activities for the north bypass rail project.*
2. *All closure/remediation activities associated with this site must be conducted in accordance with the directives contained in this correspondence, 30 TAC §335.8 and 30 TAC Chapter 350.*

Response to Comments No. 1 and 2:

UPRR acknowledges these comments and will adhere to the SWPPP, SMP, and required rules and regulations.

TCEQ SWPPP Comments No. 3, 4, and 5:

3. *UPRR must implement storm water run-on and run-off control measures, including construction of temporary berms and covering of stockpiles using plastic sheeting as needed, to manage contact water issues.*
4. *If precipitation and runoff accumulate in excavated areas, UPRR must contain the stormwater and not discharge it.*
5. *UPRR must conduct waste characterization profile analysis for containerized stormwater for off-site disposal, including the following:*
    - *Volatile Organic Compounds (VOCs) by SW846 Method 8260,*
    - *Semi-Volatile Organic Compounds (semi-VOCs) by SW846 Method 8270,*
    - *Total Petroleum Hydrocarbons (TPH) by Texas Method 1005,*
    - *RCRA metals by SW846 Method 6000/7000 series including Toxicity Characteristic Leaching Procedure (TCLP), and*
    - *pH by EPA Method 9040.*

Response to Comments No. 3, 4, and 5:

The following revisions were added to the updated SWPPP dated August 30,2021:

- Best Management Practices (BMPs) for stockpiling soils;
- Containerization of stormwater accumulation in excavations has been clarified; and
- Waste characterization analysis for profiling containerized stormwater for off-site disposal.

The revisions to the updated SWPPP can be found under Section 4 – Controls: Stormwater Management – HWPW Capped Areas on page 54 of the SWPPP.

TCEQ SMP Comment No.6:

6. *UPRR must place all excavated soil into lined roll-off boxes. Five-part composite samples must be collected from each roll-off box for waste characterization profile analysis to determine appropriate treatment and off-site disposal. Waste profile analysis must include:*
    - *VOCs by SW846 Method 8260,*
    - *Semi-VOCs by SW846 Method 8270,*
    - *TPH by Texas Method 1005,*

- *RCRA metals by SW846 Method 6000/7000 series including TCLP, and*
- *pH by EPA Method 9040.*

Response to Comments No. 6:

Based on the August 12, 2021 conference call with the TCEQ, UPRR, and Golder, the TCEQ approved proceeding with the handling option of direct-loading soils generated in the Soil Cap and Railroad Ballast Cap areas instead of requiring all soils be placed in roll-off boxes. Therefore, soils generated will be either direct-loaded or placed into lined roll-off boxes (for small volumes generated during minor soil disturbances (e.g., power pole installation)) for off-site disposal at a UPRR approved TCEQ permitted landfill facility. In addition, soils generated from the HWPW Soil and Railroad Ballast Cap Area, represented by samples CA-01 through CA-06, will be conservatively assumed to contain listed hazardous waste (F034/K001). Since this approach was discussed and approved by the TCEQ during the August 12, 2021 telephone call, the SMP was revised to clarify the soil handing procedures on page 9 of the updated SMP dated September 3, 2021.

Roll-off boxes with soil and containers with stormwater removed from the excavations will be temporarily stored next to the Container Storage Area (CSA) or within the Englewood Intermodal Yard (for soils generated in the Railroad Ballast Cap at the Englewood Intermodal Yard) pending approval of the waste profiles for disposal.

Please find attached the following final versions of the construction support plans:

- **Dust Control and Air Monitoring Plan:** *Dust Control and Air Monitoring Plan Englewood North Bypass Rail Construction Project* dated July 8, 2021 (approved by the TCEQ on July 9, 2021) is provided in **Attachment 1**;
- **Stormwater Pollution Prevention Plan:** *Stormwater Pollution Prevention Plan UP Englewood Yard North Bypass* dated August 30, 2021 is provided in **Attachment 2**; and
- **Soil Management Plan:** *Houston, TX – Englewood Yard – North Bypass Soil Management Plan* dated September 3, 2021 is provided in **Attachment 3**.

If you have any questions or need additional information, please feel free to call me at (512) 671-3434 or Mr. Kevin Peterburs of UPRR at (414) 267-4164.

Sincerely,
Golder Associates Inc.



Patrick Marty, PMP
Senior Environmental Scientist



Matthew K. Wickham, PG
Principal Hydrogeologist

CC: Mr. Kevin Peterburs, UPRR
Ms. Merrie Smith, TCEQ
Ms. Sarah Schreier, TCEQ
Ms. Alma Jefferson, TCEQ

Attachments:
Attachment 1: Dust Control and Air Monitoring Plan
Attachment 2: Stormwater Pollution Prevention Plan
Attachment 3: Soil Management Plan

ATTACHMENT 1

Dust Control and Air Monitoring Plan

Industrial Hygiene and Safety Technology, Inc.

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Leaders in Quality, Service and Innovation

Dust Control and Air Monitoring Plan

Englewood North Bypass
Rail Construction Project

Houston Wood Preserving Works
Houston, Texas

Prepared for:

Union Pacific Railroad

Author: Derrick K. Johnson

Date: 7/8/2021

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Purpose and Scope

This document describes the dust control and air monitoring procedures to be employed by Union Pacific Railroad (UPRR) and its contractors during the North Bypass Rail Construction Project, at the Houston Wood Preserving Works (the Site). The purpose of this plan is to help control migration of airborne dust emissions from the rail construction areas to non-railroad properties near the construction area.

The North Bypass Rail Construction Project will take place along UPRR rail lines west of UPRR Englewood Yard, at the Site, approximately located between Lockwood Drive and Waco Street in Houston, Texas. Construction activities will be focused primarily on upgrades to signal and telecom systems for rail in the designated area. Figure 1 provides an overview of the approximate geographic area.

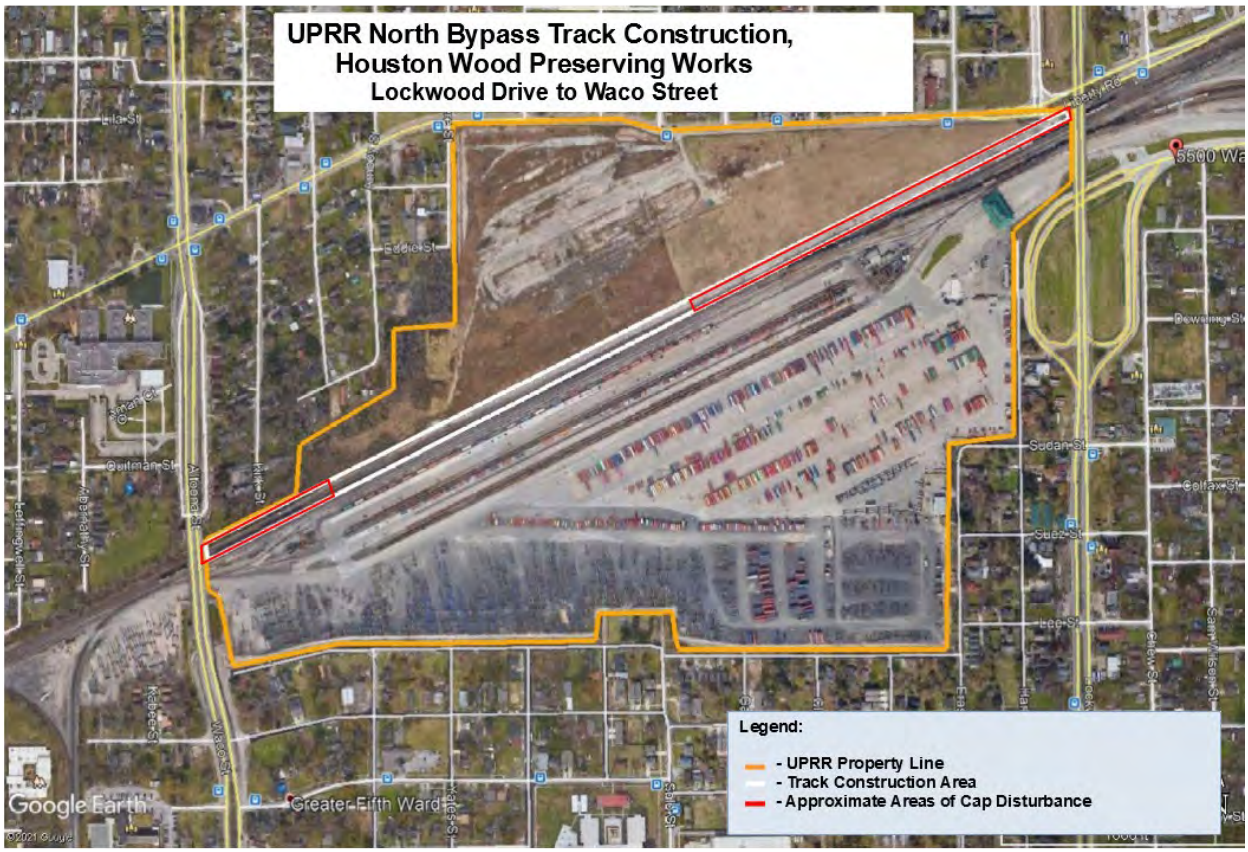

Figure 1. Site Plan for UPRR North Bypass Track Construction Project, Houston Wood Preserving Works (Lockwood Drive to Waco Street)

Section 1. Dust Control Plan

General Description of Construction Site

The North Bypass Rail Construction Project will take place along UPRR rail lines running west-southwest of UPRR Englewood Yard, approximately located between Lockwood Drive and Waco Street in Houston, Texas. Construction activities will be focused primarily on upgrades to signal and telecom systems for rail in the designated area. The affected track area is approximately 0.75 miles in length. Figure 1 provides an overview of the geographic area.

The construction area is bordered on the north side by an asphalt service road approximately 15 feet from the northernmost track. This service road will be the access route for non-track equipment and vehicles associated with construction activities. The Houston Wood Preserving Works site is north of the service road, bordered to the north by Liberty Road, which is in turn bordered to the north primarily by residential properties. Distances from the service road to residential properties north of the construction area varies from approximately 50 – 300 yards.

To the south, the construction area is entirely bordered by the Englewood Intermodal Yard and associated lots for trailers and containers. The south end of the yard is bordered in turn by residential properties. Distance to residential properties on the south side of the construction area varies from approximately 180 – 550 yards.

General Description of Construction Activities

Construction activities associated with this project are anticipated to generally include travel of vehicles and equipment along the north service road, some soil and asphalt removal on portions of the service road, digging/removal of ballast and soils on the railbeds, installation / upgrade of signal and telecom systems, track bed resurfacing (including ballast deposition), tie panel installation and rail replacement. Some soil stabilization and asphalt resurfacing may also be required.

Work crews are anticipated to be active at multiple locations throughout the construction area for the duration of the project. Specific locations and work activities will be determined by the Project Construction Manager on a daily basis, depending on job goals, site conditions and other relevant factors. The rail lines in and around the construction area will remain active for much of the project, so train movements will be frequent during the project, and some idling of locomotives in the construction area is reasonable to anticipate.

Some temporary staging of raw materials, including soil, aggregate, old asphalt, aggregate, track ballast, rail ties, rail and track panels will take place within the construction area.

Target Dust Control Levels

Control Levels for Measured Airborne Dusts

Air monitoring will be performed during all site construction activities (see Section 2, Air Monitoring Plan, for details on air monitoring methods). Real-time measurements for PM 2.5 and PM 10 particulates will be conducted, and the following control levels will apply:

- ***Notice Level*** –30-minute average of PM 2.5 particulate levels > 30 ug/m3 and/or PM 10 particulate levels > 75 ug/m3
    - The Notice Level is intended as an early warning of potential elevations in airborne dust levels. When the notice level is exceeded the Air Monitoring Specialist will investigate the area(s) where the initial elevations in dust levels are indicated, and inform the Construction Manager, Environmental Manager and other designated personnel of the known or most likely source(s) of the elevated levels, and advise what actions, if any, appear warranted to limit airborne dust generation. The Construction Manager and Environmental Manager will determine how to best implement the recommendations of the Air Monitoring Specialist.
- ***Action Level*** –30-minute average of PM 2.5 particulate levels > 55 ug/m3 and/or PM 10 particulate levels > 150 ug/m3
    - The Action Level is intended as an indication that control measures should be implemented in a timely manner to mitigate generation of airborne dusts. When the Action Level is exceeded, the Air Monitoring Specialist will investigate the area(s) where the elevations in dust levels are indicated, and inform the Construction Manager, Environmental Manager and other designated personnel of the known or most likely source(s) of the elevated levels, and advise what actions, if any, appear warranted to limit airborne dust generation. The Construction Manager and Environmental Manager will determine how to best implement the recommendations of the Air Monitoring Specialist.
- ***Stop-Work Level*** –30-minute average of PM 2.5 particulate levels > 85 ug/m3 and/or PM 10 particulate levels > 300 ug/m3
    - The Stop-Work Level is intended as an indication that continued generation of airborne dusts at or above the specified levels are likely to result in overall daily averages or short-term elevations in airborne dust levels that could be greater than the parameters established for the project. When the Stop-Work Level is exceeded, work in the affected area(s) should be stopped until additional controls are implemented. The Air Monitoring Specialist will investigate the area(s) where the elevations in dust levels are indicated, reporting his findings and recommendations to the Construction Manager, Environmental Manager and other designated personnel. This team will work together to determine what control measures will be effective in reducing dust levels and how to best implement those measures and resume construction activities. If stop-work levels are reached more than twice per day, the dust-generating activity will be stopped for the remainder of the work day and UPRR will design and implement more effective dust control procedures prior to resuming work the following work day

Visible Airborne Dust Emissions

For the purposes of this Dust Control and Air Monitoring Plan*, significant visible emissions of airborne dusts* are defined as follows:

- Visible emissions of airborne dust from construction-related activities (including, but not limited to, excavation, track work, grading, loading and unloading of aggregates and soils and vehicular traffic) that meet any or all the following criteria:
    - Generates a visible dust cloud that extends more than 10 feet vertically and/or more than 25 feet horizontally in any direction beyond the point of generation and:
        - Persists for more than five (5) minutes at a time; and/or -
        - Recurs more than twice every thirty (30) minutes.
    - Generates a visible dust cloud that is migrating or appears likely to migrate to non-railroad properties.

This plan includes control measures for specific operations that may generate significant visible airborne dust emissions. However, all project supervisory personnel should remain alert for sources of significant visible airborne dust emissions and take appropriate action to minimize such emissions to the extent practical whenever and wherever they may occur. The Air Monitoring Specialist, Construction Manager and Environmental Manager will work as a team to monitor and minimize significant visible airborne dust emissions.

Roles and Responsibilities

Air Monitoring Specialist

The Air Monitoring Specialist will have primary responsibility for maintaining and monitoring results from air monitoring stations, informing the Construction Manager and Environmental Manager when control levels are triggered, identifying activities and conditions contributing to elevated dust levels and making initial recommendations for corrective action. Specific responsibilities include:

- Maintenance and monitoring of air monitoring stations, as described in the Air Monitoring Plan section of this document.
- Making routine observations of worksite activities, with specific focus on potential dust-generating activities.
- Communicate instances of control level triggering and/or generation of significant visible airborne dust emissions to the Construction Manager and Environmental Manager, along with explanations of the sources of dust emissions and recommendations for appropriate control measures.
- Communicate results of integrated air sample analyses to designated UPRR management personnel, the Environmental Manager and Construction Manager.

- Maintain a daily log of site activities, including photographs, observations, air monitoring station inspections, integrated air sample collection, control level triggering events, notifications made to the Construction Manager and Environmental Manager, and responsive actions.
- Assist the Construction Manager and Environmental Manager in developing effective and practical dust control measures for atypical and/or as-needed situations involving dust emissions.

Construction Manager

The Construction Manager will have primary responsibility for ensuring the requirements of this Dust Control and Air Monitoring Plan are effectively and consistently implemented, and for determining and implementing as-needed controls on a case-specific basis. Specific responsibilities include:

- Informing the Air Monitoring Specialist and Environmental Manager of daily work plans and activities.
- Assigning personnel and resources adequate to ensure that dust control measures specified in this plan are effectively and consistently implemented.
- Implementing prompt and appropriate control measures when informed by the Air Monitoring Specialist of instances of significant visible airborne dust emissions or triggering of PM 2.5 or PM 10 control levels.
- Working with the Air Monitoring Specialist and Environmental Manager to develop practical and effective measures for atypical and/or as-needed dust control measures.
- Assigning personnel and resources for atypical and/or as-needed dust control measures.

The Construction Manager may delegate some or all of these responsibilities to qualified persons but remains ultimately responsible.

Environmental Manager

The Environmental Manager will have primary responsibility for working directly with the Air Monitoring Specialist, informing UPRR managers of day-to-day control measures and responses. Specific responsibilities include:

- Providing support and guidance to the Air Monitoring Specialist in communicating with project managers and UPRR personnel.
- Inform UPRR management personnel of relevant day-to-day dust control activities and atypical events.
- Work with the Air Monitoring Specialist and the Construction Manager to develop practical and effective measures for atypical and/or as-needed dust control measures.
- Effectively communicate dust control measures and requirements to UPRR managers and jobsite supervisory personnel.

The Environmental Manager may delegate some or all of these responsibilities to qualified persons but remains ultimately responsible.

Site Supervisory Personnel

Site supervisory personnel are responsible for ensuring duties and responsibilities for dust control measures assigned to them are effectively and consistently implemented. They are also responsible for monitoring and reporting to the Air Monitoring Specialist, Construction Manager and/or Environmental Manager instances of generation of significant visible airborne dusts.

Documentation and Reporting

Daily Log

The Air Monitoring Specialist will maintain a daily log of site activities, including, but not limited to:

- Descriptions or site work activities.
- Site photographs and relevant observations.
- Periodic observations of environmental conditions (windspeed, temperature, humidity, rainfall, etc.)
- Air monitoring station inspections
- Integrated air sample collection record, including sample data sheets, chain of custody records and lab reports.
- Descriptions of control level triggering events, notifications made to the Construction Manager and Environmental Manager, and responsive actions.
- Descriptions of any problems encountered and responsive actions taken.

Weekly Summary Reports

The Air Monitoring Organization will issue weekly summary reports to the designated UPRR manager(s). Weekly summaries will include, but not be limited to, the following items:

- Summary results of the week's air monitoring data.
- Summary of any control level triggering events and response actions taken.
- Summary of any problems or atypical situations encountered, and the actions taken for resolution.
- Compilation of the Air Monitoring Specialist's daily logs for the preceding week, including notes and photographs.

Closeout Report

The Air Monitoring Organization will issue a final closeout report summarizing the overall results of air monitoring and dust control efforts for the entire project.

Primary Dust Sources and Control Measures

This section specifies the primary sources of potential dust generation, and the control options to be employed to minimize dust emissions from those sources. The sources identified here are anticipated to be the most significant and/or frequent dust sources associated with the proposed work.

Vehicular Traffic Along Service Road

Significant and routine vehicular traffic is anticipated along the server road paralleling the rail tracks on the north side of the construction area. Mud and loose soils from the tires of vehicles and work equipment will deposit on the road surfaces. Environmental drying and pulverization of deposited soils along the roadway will form finer dusts which can be disturbed by vehicles and equipment traveling over the site. Heavy vehicle and equipment traffic during construction may also degrade the asphalt road surface, exposing soils and aggregates that may be disturbed by passing traffic.

The following controls are to be used to minimize dust formation from vehicular traffic along the service road:

- ***Proactive cleaning of road surface***
    - Asphalt road surface and road shoulders should be routinely cleaned of soil accumulation by street sweepers, using wet methods (i.e., street sweeper equipped with water spray bars, or water truck wetting of road surface, immediately followed by street sweeper).
        - Dry sweeping of road surfaces and shoulder is prohibited.
    - Wet sweeping should be performed:
        - Approximately every two (2) hours whenever:
            - Rain is not present and visible accumulation of mud or loose soils are present on asphalt road surfaces and shoulders.
        - No more than two (2) hours before the end of each work day whenever rain is not present, in order to help ensure the roadway is reasonably free of loose soils prior to beginning of the following day.
        - As necessary if significant visible airborne dust emissions are observed and/or PM 2.5 o4 PM 10 control levels are triggered.
        - Wet sweeping may be suspended during periods of rain and as long as the roadway is visibly wet and visible dust is not being generated by vehicular and equipment traffic.

- Dusts may begin to be generated as deposited mud and wet soils dry out and become pulverized. The normal wet sweeping schedule should be resumed when this begins to occur.

If the previously specified controls are not effective in reducing visible and/or measured roadway dust emissions, the following secondary controls will be implemented:

- ***Reduce speed of vehicular traffic on service road to 5 mph until visible and/or measured dust levels appear to be adequately controlled.***
    - Reduced speed will apply to all traffic on the service road, including crew vehicles, UPRR vehicles, haulers and any construction equipment traveling on the service road.

Vehicular and Equipment Traffic in Parking and Staging Areas

Pulverization of deposited mud and soils, as well as pulverization of paving aggregates, may result in generation of airborne dusts from staging and parking areas. The significance of the dust generation will vary with the intensity and frequency of traffic in those areas. Generally, mornings and late afternoons at the end of the workday will have the highest potential for dust generation resulting from arrival and departure of worker vehicles.

The following controls will be employed to limit dust from traffic in parking and staging areas:

Wetting of surfaces in parking and staging areas

- A water truck will wet parking and staging areas whenever rain is not present and surfaces are not visibly wet or damp, as follows:
    - Daily:
        - At least once each workday, between 10:00 am and noon.
        - At least once each workday, in the late afternoon, no more than two (2) hours before the end of each work day.
    - As necessary if significant visible airborne dust emissions are observed and/or PM 2.5 o4 PM 10 control levels are triggered.

Note: *If parking and staging areas are unpaved, or paved with aggregate materials, application of a commercial magnesium chloride solution can be effective in reducing dust emissions and the need for as-frequent wetting. Commercially available magnesium chloride solutions are readily available and easily applied. They can remain effective for 2 – 6 months or more, depending on traffic and environmental conditions.*

Soil Stabilization Using Lime / Fly Ash Mixtures

Deposition of dry lime/fly ash mixtures can produce short periods of highly visible dust and increase measured levels of visible dust within a few hundred yards of the deposition site. The following controls will be used to control dust emissions from deposition of lime / fly ash mixtures:

- Where feasible, employ lime / fly ash slurry instead of dry lime / fly ash.
- Where use of a slurry is not feasible, to the extent practical attempt to select optimal environmental conditions for deposition activities, as follows:
    - Schedule deposition when winds are primarily from the north or east-northeast, so that any dusts are directed away from the nearest non-railroad properties.
    - Delay deposition activities if winds would carry dusts onto nearby non-railroad properties.
    - Schedule deposition as early in the day as practical when humidity is highest and will help reduce the suspension time of dusts.
    - Schedule deposition activities to be completed in the minimum amount of time possible.
    - If high winds are present, wet deposited lime / fly ash mixtures as soon as practical to limit secondary dust generation from wind action on the deposited materials.

Ballast Deposition by Belt Train

Belt trains are specially designed rail engines and ballast cars that use a series of conveyor belts to feed ballast from loaded ballast cars to a distribution conveyor that can typically be oriented to deposit ballast in front of or to the side of the controlling engine. As the ballast falls from the final distribution conveyor, ballast dust can be released. The following controls will be used to minimize dust production from ballast deposition by belt trains:

- Only washed ballast will be used for The Site construction activities.
- Ballast delivery and deposition will be scheduled to allow washed ballast to be deposited as soon as practical after initial loading, preferably while the ballast is still wet or damp from washing.
- To the extent practical, belt train operations will be scheduled to occur when prevailing winds are from the north, north-northeast or north-northwest, in order to minimize dust migration onto non-railroad properties.

Ballast Regulation

Ballast regulation involves the use of track equipment known as a ballast regulator to distribute deposited ballast on the track bed. The ballast regulator uses plows aligned on the front of the machine to move the deposited ballast, and rotating brooms to clean loose ballast and debris from the tracks. When used on dry ballast, ballast regulators can produce significant levels of airborne dust. The following controls will be used to minimize dust from ballast regulation activities:

- If rain is not present and ballast is not wet or damp:
    - The track bed to be regulated will be wet with water, using a spray boom, side-spray water truck or other water delivery system capable of delivering sufficient water to wet the track bed surface.
    - Wetting must occur no more than two (2) hours prior to regulation.

Loose Aggregate and Soil Loading, Hauling and Unloading

Loading and unloading of loose aggregate and soils, whether excavated materials to be transported offsite or fresh fill material intended for onsite use, can produce airborne dusts if the materials are dry. Hauling of these materials in uncovered or leaking transports can allow materials to blow off the tops of the transport and/or fall to roadways and other traffic routes, where they can dry and become pulverized, potentially contributing to airborne dust levels. The following controls will be employed to minimize airborne dusts potentially generated by loading, hauling and unloading loose aggregates and soils:

- Transport:
    - Truck beds and containers used for hauling loose aggregate and soils will be covered on top during transport, to prevent blowing off of materials while onsite and during travel.

- Unloading gates on truck beds and containers used for hauling loose aggregate and soils will be kept functional and closed at all times while traveling to, from and within the construction site. Loose soils and aggregates must not be allowed to spill onto onsite or offsite traffic paths.

- Loading and Unloading:
  - Loading and unloading of loose aggregates and soils should be monitored closely to ensure that airborne dust generation is minimized.
  - Where loading or unloading appears to generate significant visible airborne dust emissions and / or triggers PM 2.5 or PM 10 control levels, the following controls will apply:
    - Loading or unloading should be completed in the shortest amount of time possible.
    - If wind conditions appear to create a potential for migration of visible airborne dusts to non-railroad properties, any or all of the following will be employed, as most practical for the situation:
      - Loading or unloading will be paused until conditions are more favorable.
      - Materials will be loaded or unloaded in an alternate location, further from non-railroad properties.
      - Water will be used to wet the materials being loaded or unloaded, reducing generated dusts.
        - Important! No wetting of potentially hazardous materials during loading should be performed without prior approval from the Site Environmental Manager.

Secondary Dust Sources and Control Measures

This section specifies secondary sources of potential dust generation, and the control options to be employee to minimize dust emissions from those sources. The sources identified here are anticipated to be infrequent and/or to generate limited elevations in dust levels. Specified controls are to be implemented on an as-needed basis and are not required when the specified sources are not present or active or have little potential to generate airborne dust.

Excavation Activities

Excavation activities include digging with backhoes, trackhoes and trenchers, as well as moving and relocation of excavated soils and aggregates with the same equipment, as well as dozers and front-end loaders. Excavated soils and aggregates on this project are anticipated to typically have a relatively high moisture content, and to not routinely produce significantly elevated dust levels unless the excavated materials are allowed to dry. In the event that excavation activities produce significant visible airborne

dust emissions and/or trigger PM 2.5 or PM 10 control levels, the following dust control measures will be used:

- Where practical, use water to wet the excavation and/or excavated materials.
- Wetting need not be extreme, only enough to suppress significant visible dust emissions for the duration of the operation.

Grading

Grading involves the use of grader or other heavy equipment equipped with a blade or plow to level surface soils and aggregates. Because grading typically affects primarily upper surface depositions, if those substrates are dry, significant dust generation may occur. If grading activities result in significant visible airborne dust emissions and/or trigger PM 2.5 or PM 10 control levels, or if observations indicate that surface layers to be graded are visibly dry, the following dust control measures will be used:

- Use water to wet the surfaces to be graded.
- Wetting should occur no more than two (2) hours prior to grading.

Ballast Tamping

Ballast tamping involves use of a track-mounted machine that inserts heavy steel tines below the surface of the ballast and vibrated those tines to help compact the ballast. Ballast tamping frequently generates only light, localized visible dust that is unlikely to migrate far from the operation itself. However, if ballast is very dry and dirty, tamping may occasionally generate higher levels of visible and/or measured dust. Should tamping be observed to generate significant visible airborne dust emissions and/or trigger PM 2.5 or PM 10 control levels, the following controls will be used:

- Use water to wet the track bed area(s) to be tamped.
- Wetting should occur no more than two (2) hours prior to tamping.

Concrete Cutting, Breaking or Drilling

Concrete cutting or drilling involves the use of saws, drills, hammers and other power tools to cut, break or drill concrete. These operations can produce high levels of airborne dust. The following controls will be used for such activities:

- Saws, hammers, drills and other power tools must be equipped with dust capture and collection systems, or wet methods must be used for any cutting, breaking or drilling operations.

Soil Scarifying Activities

Soil scarifying involves the use of heavy equipment fitted with steel tines to till the upper surfaces of a soil or aggregate bed. The potential for dust generation from this activity is highly dependent on the moisture

content of the substrate being scarified. Scarification of wet or damp soils may generate little or no airborne dust, while drier substrates may produce more. Should scarifying operations be observed to generate significant visible airborne dust emissions and/or trigger PM 2.5 or PM 10 control levels, the following controls will be used:

- Use water to wet the substrate to be scarified.
- Wetting should occur no more than two (2) hours prior to scarification.

Asphalt Removal and Loading

Asphalt removal and loading typically involves the breaking up of asphalt using backhoes or trackhoes and then loading the broken asphalt and associated aggregates and soils onto to transport truck for disposal. The potential for dust generation from this activity is highly dependent on the moisture content of the aggregates and soils beneath the asphalt itself. Wet or damp soils and aggregates may generate little or no airborne dust, while drier substrates may produce more. Loading is more likely to generate dust emissions than the actual removal. Should asphalt removal and loading operations be observed to generate significant visible airborne dust emissions and/or trigger PM 2.5 or PM 10 control levels, the following controls will be used:

- Use water to wet the soils and aggregates being disturbed and/or loaded.

Thermite Welding

Thermite welding involves encasing rail ends in a ceramic mold and igniting a thermite charge to heat the rail in the mold, welding the two rail ends together. This process can create brief (< 1 minute) emissions of dense smoke as the thermite burns. The following control measures will be used for thermite welding:

- To the extent practical, thermite welding will be scheduled when winds are from the north, north-northwest or north-northeast to minimize migration of smoke to non-railroad properties.

Other Sources of Dust Emissions not Specifically Identified

During the course of the project, other sources of dust emissions may be observed. If these sources generate significant visible airborne dust emissions and/or trigger PM 2.5 or PM 10 control levels, the Air Monitoring Specialist, Construction Manager and Environmental Manager will work as a team to develop and implement appropriate controls.

Section 2. Air Monitoring Plan

Purpose and Scope

This air monitoring plan has been developed to ensure that dust control measures implemented for the project are effective in controlling migration of airborne dusts from railroad construction activities to non-railroad properties. Air quality monitoring under the scope of this plan will consist of fence-line ambient air monitoring to measure airborne dust concentrations. Air monitoring will be conducted by IHST, Inc.

The primary objectives of the perimeter air monitoring are to:

- Monitor and record the ambient airborne dust concentrations at the Site property lines immediately adjacent to residential properties.
- Help ensure that background-adjusted dusts levels at the UPRR property lines do not exceed the current EPA NAAQS for particulate matter.
- Ensure that engineering controls and work practices help minimize potential off-site drift of airborne dusts.

General

The USEPA's 2012 National Ambient Air Quality Standards (NAAQS) standard for $PM_{2.5}$ and PM_{10} particulate matter have been used to develop the air monitoring plan for this project. $PM_{2.5}$ particulates are fine particulates which can penetrate deeper into the respiratory system. PM_{10} are coarser particles. Of interest in this project are the 24-hour levels established for these particulates. The 24-hour levels represent airborne concentrations averaged over a 24-hour period. The respective particulate NAAQS levels are presented below:

- $PM_{2.5}$ (24-hr average): 35 ug/m3
- PM_{10} (24-hr average): 150 ug/m3

The goal of the Action Levels established for this project is to help ensure that rail construction activities do not contribute significantly to airborne particulate concentrations at off-property locations. Control levels are chosen to minimize the contribution of fugitive dust emissions from the rail construction activities to the overall particulate matter concentrations.

Methods of Monitoring

Data-logging Particulate Monitors and Weather Station

Real-time particulate air monitors equipped with $PM_{2.5}$ and PM_{10} size-selective laser particle counters will be used at the Site to monitor dust levels at or near the property boundaries during track construction activities. Each monitor will be equipped with paired, manufacturer-calibrated PlanTower aspirated aerosol sensors. Data from both sensors will be captured and averaged to provide single $PM_{2.5}$ and PM_{10} concentrations at each monitoring station. The dual-sensor configuration provides redundancy, as well as

rapid detection of potential intra-sensor sensor inconsistencies and/or sensor failure. The sensors collect internal measurements at 10 second intervals and report 2-minute average concentrations of both $PM_{2.5}$ and PM_{10} particulate matter.

One monitoring station (located immediately adjacent to the PlanTower sensor set at the background station) will be equipped with a portable environmental beta-attenuation mass monitor (E-BAM). The E-BAM is a Federal Equivalent Method (FEM) for particulate measurement which uses beta radiation attenuation[1] to measure deposited particulate and is unaffected by temperature and relative humidity. The E-BAM and background laser particle station will be used as continuous onsite control references for the laser particle counters at the other monitoring stations[2]. Perimeter monitors will be equipped with omni-directional sampling heads and mounted on tripods, fenceposts or other suitable support at an approximate height of 5-6 feet.

A weather station will also be placed at a background sampling location to measure wind direction, wind speed, temperature, humidity and precipitation. Air monitors and weather station will log data at 2 -minute intervals. All stations will be powered by deep-cycle marine batteries coupled with solar panels.

Instruments will be connected to the internet through cellular modems, and all data will be uploaded to a website that will allow real-time and historic review of the data by onsite IHST personnel as well as remotely located IHST, UPRR and other designated management personnel.

Real-time data from the downwind particulate monitors will be evaluated in 30-minute averaged blocks to provide comparison to Control Level criteria specified in the Dust Control Plan (Section 1 of this document).

Integrated Air Samples

Soil sampling in areas of the site were found to have concentrations of polynuclear aromatic hydrocarbons (PAH's) and some metals.

Using the maximum contaminant concentration detected in any location for soil samples, IHST performed screening calculations to develop highly conservative screening estimates of airborne concentrations of contaminants identified in the soil samples. IHST's screening methodology assumed a 24-hour average airborne dust concentration of 3 mg/m3 (far higher dust levels than realistically expected for the project) and a very high breathing rate (50 cubic meters per air over 24 hours). Contaminants were assumed to be present in generated dust at the same mass ratios as those detected in the soil samples. These airborne concentrations were further extrapolated to 24-hour dose (mg/kg of body weight) using a conservative value body weight of 30 kg (~ 66 lbs). Extrapolated values were compared to such NAAQS, AMCV, oral and inhalation RfD/RfC and ACIH TLVs as have been established for the specified metals.

[1] The E-BAM does not pose a radiologic hazard. The E-BAM units contain an exempt quantity of less than 100 µCi of Carbon 14 as defined in 10 CFR 30.71- Schedule B. As such, the purchaser/user is exempt from any regulatory requirements in the USA. This is a similar arrangement to that used for common household smoke alarms, which also usually contain a very small amount of radioactive material. Per regulation, an engraved metal tag identifying the source type and activity is permanently attached to each BAM instrument, but no radioactive hazard symbols are to be attached to the unit due to the exempt quantity.

[2] Field and laboratory evaluation of the PlanTower sensors (used in PurpleAir aerosol monitors) by California's South Coast Air Quality Management Division showed the sensors to have high precision, low intra-model variability, and very strong correlation with Federal Equivalent Method (FEM) instruments. These results indicate the PlanTower sensors, paired with the onsite E-BAM reference instrument, will provide reliable results and enable high-density deployment of particulate monitoring stations along the site perimeter.

Where only an ACGIH TLV value (an occupational exposure limit) was available, a safety factor of 100x less than the occupational limit was used as the screening value.

The conservative screening estimates indicated that potential for significant airborne exposures to any of the soil contaminants is exceptionally low. However, due to the close proximity of the work site to non-railroad properties and from an abundance of caution, IHST selected a limited number of contaminants for which integrated air sampling will be performed, in order to help ensure that potential airborne contaminants from the jobsite do not migrate to neighboring properties. Contaminants selected for monitoring were based on a combination of estimated airborne concentration and potential health effects, including cancer. Integrated air samples will be collected for the selected compounds to verify that dust control measures are effectively limiting potential migration of these agents to non-railroad properties.

The agents to be sampled and the sample collection and analysis methods are specified in the following table.

Table 1. Integrated Air Sampling Agents and Analysis Methods

Agent	Collection Media	Air Flow Rate	Analysis Method
Particulate-phase PAHs	PUF/XAD2	10 lpm	EPA TO-13A
Arsenic	PVC filter	10 lpm	NIOSH 7303-MS
Lead	PVC filter	10 lpm	NIOSH 7303/7300 ICP-MS

Dates of collection of integrated air samples and number of samples collected will vary, based on site activities, locations affected and environmental conditions. A total of up to 60 air samples for each agent are initially planned.

Control Levels for metals and PAHs will be as follows:

- Arsenic:
    - The Texas Commission on Environmental Quality (TCEQ) has established a long-term Air Monitoring Comparison Value (AMCV)[3] for arsenic of 0.067 ug/m^3.
    - Sample analysis results will be compared to the long-term AMCV. Air samples will be collected at sufficient volume and duration to ensure reporting limits are at or below the long-term AMCV.
    - Where sample period average arsenic concentrations are at or below the AMCV or not detected in air samples with a detection limit at or below the AMCV, dust control measures will be considered effective.

[3] AMCVs are chemical-specific air concentrations set by the TCEQ and intended to protect human health and welfare. Exposure to an air concentration at or below the AMCVs is not likely to cause adverse health effects in the general public, including sensitive subgroups such as children, the elderly, pregnant women, and people with preexisting health conditions.

- Lead:
    - The USEPA has established a National Ambient Air Quality Standard (NAAQS) for lead of 0.15 ug/m3, as a three-month average. The TCEQ has adopted this value by reference in its AMCV for lead.
    - Air sample results for lead will be compared to the NAAQS of 0.15 ug/m3 to determine effectiveness of dust control measures. Air samples will be collected at sufficient volume and duration to ensure reporting limits are at or below the NAAQS.
    - Where sample period average lead concentrations are at or below the NAAQS or not detected in air samples with a reporting limit at or below the NAAQS, dust control measures will be considered effective.

- PAHs:
    - The Texas Commission on Environmental Quality (TCEQ) has established interim Air Monitoring Comparison Value (AMCV) for selected PAHs.
    - Air sample results for PAHs will be compared to the long-term AMCV specified in the table below to determine effectiveness of dust control measures.

Current TCEQ AMCV for PAHs
(Source: TCEQ TAMIS Database, retrieved 7/1/2021)

PAH	Short-Term AMCV (ug/m3)	Long-Term AMCV (ug/m3)
Acenaphthene	100	10
Acenaphthylene	100	10
Anthracene	1	0.067
Benzo(a)anthracene	0.5	0.05
Benzo(a)pyrene	None	0.017
Benzo(b)fluoranthene	0.5	0.05
Benzo(g,h,i)perylene	0.5	0.05
Benzo(k)fluoranthene	0.5	0.05
Chrysene	0.5	0.05
Dibenzo(a,h)anthracene	0.5	0.05
Fluoranthene	0.5	0.05
Fluorene	10	1
Indeno(1,2,3-cd)pyrene	0.5	0.05
Naphthalene	500	50
Phenanthrene	8	0.8
Pyrene	0.5	0.05

    - Where sample period average PAH concentrations are at or below the specified long-term AMCV or not detected in air samples with a reporting limit at or below the long-term or short-term AMCV, dust control measures will be considered effective. Air samples will be collected at sufficient volume and duration to ensure reporting limits are at or below the long-term AMCV.

After sample collection, samples will be properly packaged and secured and shipped overnight to a qualified laboratory for rush analysis. Sample results will be available in 4-5 business of receipt by the laboratory.

If sample results indicate concentrations above specified control levels, IHST and UPRR will determine appropriate responses necessary to further reduce dust emissions from the sampled operations/areas.

Monitoring Station Locations

Eleven (11) PM 2.5 / PM 10 monitoring stations will be active each day construction activities are to be performed. Up to three (3) PAH / metals integrated air sampling stations will be active on selected days when cap-disturbing activities are conducted. See Figure 2 for illustration of air sampling station locations.

One (1) PM 2.5 / PM 10 monitoring station and one (1) E-BAM station will be set up on the southeast corner of the Englewood Yard Office lot, off Grand Street. A weather station will also be set up at this location. These stations will provide background reference levels for quality control purposes. The lot behind the Yard Office is isolated and protected, and sufficiently distant from the construction area and locations where work equipment and locomotives may be idling. It is also sufficiently distant from public roads and other operations that could create confounding localized variations in particulate levels.

Determination of PM 2.5 / PM 10 Particulate Levels for Control Purposes

Configuration of the worksite poses some unique challenges in that some locations on the site are in close proximity to non-railroad properties, and the site is essentially a 0.75 mile narrow strip, where different types of work may be performed concurrently at any given location time and location. Effective monitoring of dust emissions therefore requires a relative high density of air monitoring stations.

Air quality in the Houston area is variable, and the Site is located in a mixed industrial / residential area. Construction activities are not the sole source of variations in particulate levels which are used to determine whether dust concentrations are within acceptable control limits. The following paragraphs describe how IHST will process and interpret air sampling data for this project.

- Only readings from PM 2.5 / PM 10 stations which are downwind or parallel to construction activities or are located in areas visibly impacted by construction dust will be used for comparison to the dust Control Levels.
- Observations of visual dust emissions from construction activities and traffics levels in the Intermodal Yard will be considered in determining whether potential elevations in dust levels on the southern perimeter are attributable to construction activities.
- If IHST identifies other site or environmental conditions that clearly may confound particulate level measurements for control purposes, IHST may apply additional reasonable corrections or exclusions to monitoring station data. Any such corrections or exclusions will be documented and communicated to UPRR managers and the project Environmental Manager.

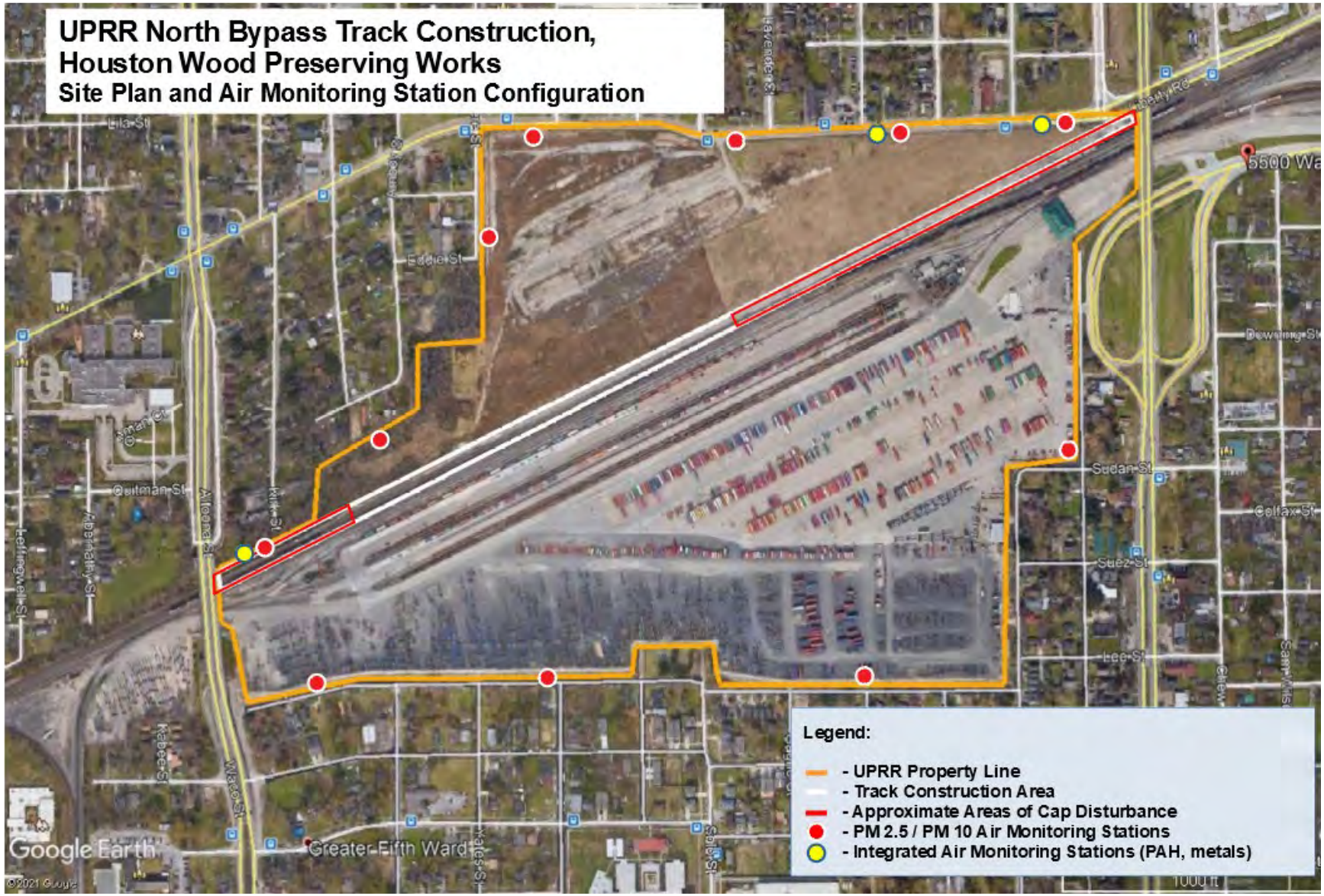

Figure 2. Air Monitoring Station Configuration for North Bypass Track Construction Project, Houston Wood Preserving Works

Notifications

Notifications of exceedances of the particulate Control Levels will be sent via text message to IHST onsite personnel and designated site managers.

The IHST onsite Air Monitoring Specialist will be the primary individual responsible for monitoring the notifications and recommending additional dust mitigation procedures.

Procedures for Air Monitoring Station and/or Weather Station Failure

In the event of failure of one or more monitoring stations and/or the Weather Station, the IHST onsite industrial hygienist will immediately contact the IHST project manager.

The IHST project manager will arrange for timely correction of the problem, including, if necessary, replacement of the affected instrumentation with 24 hours.

ATTACHMENT 2

Stormwater Pollution Prevention Plan

CONSTRUCTION ECO SERVICES

STORMWATER POLLUTION PREVENTION PLAN

UP ENGLEWOOD YARD NORTH BYPASS

HOUSTON / HARRIS COUNTY

W.T. BYLER COMPANY, INC.

15203 LILLJA ROAD
HOUSTON, TX 77060

PREPARED BY:
Construction EcoServices
13810 Hollister Drive
Suite #100
Houston, TX 77086
832.456.1000
ecosvs.com

IMPORTANT:
Retain this complete document for three years after project completion.

INTRODUCTION AND BACKGROUND

In 1972, Congress passed the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), to restore and maintain the quality of the nation's waters. The ultimate goal of the CWA was to ensure the nation's rivers and streams were fishable, swimmable, and drinkable. The CWA has been amended several times.

One important set of amendments was the Water Quality Act of 1987 that established a phased approach for Stormwater discharge regulation in the United States. The CWA established the National Pollutant Discharge Elimination System (NPDES), a Stormwater program which requires operators of construction sites disturbing one acre or more to obtain authorization to discharge under an NPDES construction Stormwater permit. The development and implementation of Stormwater pollution prevention plans (SWPPP) is the focus of NPDES Stormwater permits for regulated construction activities. The Texas Commission on Environmental Quality is authorized in the state of Texas to implement the NPDES program under the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit No. TXR150000.

Development, implementation, and maintenance of the SWPPP provides the framework for reducing soil erosion and minimizing pollutants in Stormwater during construction. The SWPPP describes and ensures the implementation of practices that will be used to reduce the pollutants in Stormwater discharges associated with construction activity at the construction site and assure compliance with the terms and conditions of the TCEQ TPDES program for construction sites.

Construction EcoServices is a solutions-oriented company focused on delivering innovative answers to Stormwater quality management problems. From turnkey SWPPP compliance services that relieve the regulatory burden on General Contractors during construction activity; to post-construction solutions for Civil Engineers that provide new answers for Stormwater quality treatment, slope and channel stabilization and underground detention; our objective is always the same—lowering total costs of compliance while raising compliance performance through the application of innovation and a service driven culture.

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SWPPP Objectives

The SWPPP outlines the steps you will take to comply with the terms and conditions of your construction general permit. Keeping the following objectives in mind as you proceed during construction will help guide you in addressing your permit requirements and in protecting water quality.

- **Minimize the area and duration of exposed soils**
  Clearing only land that will be under construction in the near future, a practice known as construction phasing, can reduce off-site sediment loads by 36 percent for a typical development. Additionally, minimizing the duration of soil exposure by stabilizing soils quickly can reduce erosion dramatically.
- **Control the perimeter of your site**
  Divert Stormwater coming on to your site by conveying it safely around, through, or under your site. Avoid allowing run-on to contact disturbed areas of the construction site. For the runoff from the disturbed areas of the site, remember that BMPs such as silt fence is there to capture sediment before it leaves your site.
- Protect receiving waters adjacent to your site
  Erosion and sediment controls are used around the site as needed, but operators should consider additional controls in areas that are adjacent to receiving waters or other environmentally sensitive areas. Remember, the primary purpose of erosion and sediment controls is to protect surface waters.
- **Follow pollution prevention measures**
  Provide proper containers for waste and garbage at your site. Store hazardous materials and chemicals so that they are not exposed to Stormwater. If dewatering is needed, remember that the dirty water must be filtered before discharged offsite. Pay particular attention to the viability and function of your stabilized construction exit and concrete wash out facility.
- **Protect slopes and channels**
  Convey concentrated Stormwater runoff around the top of slopes and stabilize slopes as soon as possible. This can be accomplished using pipe slope drains or earthen berms or other flow controls that will convey runoff around the exposed slope. Avoid disturbing natural channels and the vegetation along natural channels, if possible.
- **Stabilize the site as soon as possible**
  Get your site to final grade and either permanently or temporarily stabilize all bare soil areas as soon as possible. Take into consideration germination times for the grasses or other vegetation selected and provide additional stabilization materials (such as Flexible Growth Medium) on erosion prone areas such as slopes and drainage ways. Also consider seasonal limitations to plant establishment and growth, such as drought or cold temperatures, and make an effort to ensure that areas that are not showing adequate vegetation establishment are reseeded immediately. Areas needed for future roads, construction, or other purposes should be temporarily stabilized (see your permit for requirements related to areas of the site not currently under active construction). Establishing a vegetated cover on as much of the site as possible will help to minimize erosion and sediment problems. Perimeter controls should remain in place until final stabilization has been achieved.

Deadlines for SWPPP Preparation, Implementation and Compliance

The SWPPP must be prepared prior to filing the Notice of Intent (NOI) for a large site (≥ 5 AC) or posting the Construction Site Notice for a small site (≥1 AC but <5 AC) and implemented prior to commencing construction activities that result in soil disturbance.

Plan Review and Making Plans Available

The SWPPP must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWPPP, it may be kept on site in a water-resistant lockbox for easy access. The SWPPP must be made readily available at the time of an on-site inspection by federal, state, or local agencies approving sediment and erosion plans, grading plans, or Stormwater management plans; local government officials; and the operator of the pertinent municipal separate storm sewer (MS4) receiving discharges from the site.

Primary and secondary operators of large construction activities must each post a TCEQ Construction Site Notice, respective to their role as an operator at the construction site, as required above.

Primary and secondary operators of small construction activities must post the TCEQ site notice, as required above.
These notices must be posted near the main entrance to the construction site and be readily available for viewing by the general public (without having to trespass on your site); local, state, and federal authorities.

If the construction project is a linear construction project, such as a pipeline or highway, the notices must be placed in a publicly accessible location near where construction is actively underway. Site notices for small and large construction activities at these linear construction sites may be located, as necessary, along the length of the project, but must still be readily available for viewing by the general public; local, state, and federal authorities; and contain the following information:

- the site-specific TPDES authorization number for the project if assigned;
- the operator name, contact name, and contact phone number;
- a brief description of the project; and
- the location of the SWPPP.

Responsibilities of Operators

All secondary operators and primary operators with control over construction plans and specifications must:

- ensure the project specifications allow or provide that adequate BMPs are developed to meet the requirements of the Texas General Permit;
- ensure that the SWPPP indicates the areas of the project where they have control over project specifications (including the ability to make modifications in specifications) in the event that this project has multiple operators;
- ensure that any other operators that may be affected by modifications in project specifications are notified in a timely manner so that they may modify their best management practices as necessary to remain compliant with the conditions of the general permit; and
- Ensure that the SWPPP for portions of the project where they are operators indicates the name and site-specific TPDES authorization numbers for permittees with the day-to-day operational control over those activities necessary to ensure compliance with the SWPPP and other permit conditions. If a primary operator has not been authorized or has abandoned the site, the secondary operator is considered to be the responsible party and must obtain authorization as a primary operator under the permit, until the authority for day-to-day operational control is transferred to another primary operator. The new primary operator must update or develop a new SWPPP that will reflect the transfer of operational control and include any additional updates to the SWPPP to meet requirements of the permit.

Primary Operators with day-to-day operational control of those activities at a project that are necessary to ensure compliance with your SWPPP and other permit conditions must ensure that the SWPPP accomplishes the following requirements:

- meets the requirements of this general permit for those portions of the project where they are operators;
- identifies the parties responsible for implementation of best management practices (BMPs) described in the SWP3;
- indicates areas of the project where they have operational control over day-to-day activities; and
- Includes, for areas where they have operational control over day-to-day activities, the name and site-specific TPDES authorization number of the parties with control over project specifications, including the ability to make modifications in specifications.

Terminating Coverage

Notice of Termination (NOT) Required

If you submitted an NOI for authorization under the general permit, you must apply to terminate that authorization by submitting a Notice of Termination (NOT) form. Compliance with the conditions and requirements of this SWPPP is required until an NOT is submitted.

The NOT must be submitted to TCEQ, and a copy of the NOT provided to the operator of any MS4 receiving the discharge within 30 days after any of the following conditions are met:

- final stabilization has been achieved on all portions of the site that are under your responsibility;
- a transfer of operational control has occurred (see below); or
- You have obtained alternative authorization under an alternative permit.

Termination of Coverage for Small Construction Sites

Each operator must remove the Construction Site Notice (CSN) upon meeting any of the conditions listed below, complete the applicable portion of the CSN related to removal of the site notice, and submit a copy of the completed CSN to the operator of any MS4 receiving the discharge, within 30 days of meeting any of the following conditions:

- final stabilization has been achieved on all portions of the site that are under your responsibility;
- a transfer of operational control has occurred (see below); or
- You have obtained alternative authorization under an alternative permit.

Authorization to discharge under this general permit terminates immediately upon removal of the applicable site notice. Compliance with the conditions and requirements of this permit is required until the CSN is removed.

Transfer of Operational Control

Coverage under the general permit is not transferable. A transfer of operational control includes changes to the structure of your company, such as changing from a partnership to a corporation, or changing to a different corporation type such that a different filing (or charter) number is established with the Texas Secretary of State.

When the primary operator of a large construction activity changes or operational control is transferred, the original operator must submit a Notice of Termination (NOT) within ten (10) days prior to the date that responsibility for operations terminates, and the new operator must submit an NOI at least ten (10) days prior to the transfer of operational control.

Operators of small construction sites who were not required to file an NOI must remove the original Construction Site Notice (CSN), and the new operator must post the required CSN prior to the transfer of operational control.

A transfer of operational control occurs when either of the following criteria is met:

- another operator has assumed control over all areas of the site that have not been finally stabilized; and
- all silt fences and other temporary erosion controls have been removed, scheduled for removal as defined in the SWPPP, or transferred to a new operator, provided that the permitted operator has attempted to notify the new operator in writing of the requirement to obtain permit coverage. Record of this notification (or attempt at notification) shall be retained by the operator with all other SWPPP documentation for three (3) years. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.
- a homebuilder has purchased one or more lots from an operator who obtained coverage under this general permit for a common plan of development or sale. The homebuilder is considered a new operator and shall comply with the requirements of this permit. Under these circumstances, the homebuilder is only responsible for compliance with the general permit requirements as they apply to the lot(s) it has operational control over in a larger common plan of development, and the original operator remains responsible for common controls or discharges, and must amend its SWPPP to remove the lot(s) transferred to the homebuilder.

Definitions of Terms Found in This SWPPP

Arid Areas
Areas with an average annual rainfall of 0 to 10 inches.

Best Management Practices (BMPs)
Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Commencement of Construction
The initial disturbance of soils associated with clearing, grading, or excavation activities, as well as other construction-related activities (e.g., stockpiling of fill material, demolition).

Common Plan of Development
A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located ¼ mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction Activity
Includes soil disturbance activities, including clearing, grading, excavating, construction-related activity (e.g., stockpiling of fill material, demolition), and construction support activity. This does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction Support Activity
A construction-related activity that specifically supports construction activity, which can involve earth disturbance or pollutant-generating activities of its own, and can include, but are not limited to, activities associated with concrete or asphalt batch plants, rock crushers, equipment staging or storage areas, chemical storage areas, material storage areas, material borrow areas, and excavated material disposal areas. Construction support activity must only directly support the construction activity authorized under this general permit.

Dewatering
The act of draining rainwater or groundwater from building foundations, vaults, and trenches.

Discharge
For the purposes of this permit, the drainage, release, or disposal of pollutants in stormwater and certain non-stormwater from areas where soil disturbing activities (e.g., clearing, grading, excavation, stockpiling of fill material, and demolition), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck wash out, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

Drought-Stricken Area
For the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html

Edwards Aquifer
As defined under Texas Administrative Code (TAC) § 213.3 of this title (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone
Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the Texas Commission on Environmental Quality (TCEQ) and the appropriate regional office. The Edwards Aquifer Map Viewer, located at the following link, can be used to determine where the recharge zone is located.

- http://www.tceq.texas.gov/compliance/field_ops/eapp/mapdisclaimer.html

Edwards Aquifer Contributing Zone
The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer. The contributing zone is located upstream (upgradient) and generally north and northwest of the recharge zone for the following counties: all areas within Kinney County, except the area within the watershed draining to Segment No. 2304 of the Rio Grande Basin; all areas within Uvalde, Medina, Bexar, and Comal Counties; all areas within Hays and Travis Counties, except the area within the watersheds draining to the Colorado River above a point 1.3 miles upstream from Tom Miller Dam, Lake Austin at the confluence of Barrow Brook Cove, Segment No. 1403 of the Colorado River Basin; and all areas within Williamson County, except the area within the watersheds draining to the Lampasas River above the dam at Stillhouse Hollow Reservoir, Segment No. 1216 of the Brazos River Basin. The contributing zone is illustrated on the Edwards Aquifer map viewer at:

- http://www.tceq.texas.gov/compliance/field_ops/eapp/mapdisclaimer.html.

Effluent Limitations Guideline (ELG)
Defined in 40 Code of Federal Regulations (CFR) § 122.2 as a regulation published by the Administrator under § 304(b) of the Clean Water Act (CWA) to adopt or revise effluent limitations.

Facility or Activity
For the purpose of this permit, referring to a construction site, the location of construction activity, or a construction support activity that is regulated under this general permit, including all contiguous land and fixtures (for example, ponds and materials stockpiles), structures, or appurtenances used at a construction site or industrial site.

Final Stabilization
A construction site status where any of the following conditions are met:

a) All soil disturbing activities at the site have been completed and a uniform (that is, evenly distributed, without large bare areas) perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
b) For individual lots in a residential construction site by either:
    1) the homebuilder completing final stabilization as specified in condition (a) above; or
    2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization. If temporary stabilization is not feasible, then the homebuilder may fulfill this requirement by retaining perimeter controls or BMPs; and informing the homeowner of the need for removal of temporary controls and the establishment of final stabilization. Fulfillment of this requirement must be documented in the homebuilder's stormwater pollution prevention plan (SWP3).
c) For construction activities on land used for agricultural purposes (such as pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to

surface water and areas that are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
    1) Temporary erosion control measures (for example, degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and
    2) The temporary erosion control measures are selected, designed, and installed to achieve 70% of the native background vegetative coverage within three years.

Hyper chlorination of Waterlines
Treatment of potable water lines or tanks with chlorine for disinfection purposes, typically following repair or partial replacement of the waterline or tank, and subsequently flushing the contents.

Impaired Water
A surface water body that is identified as impaired on the latest approved CWA §303(d) List or waters with an EPA-approved or established total maximum daily load (TMDL) that are found on the latest EPA approved Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d), which lists the category 4 and 5 water bodies.

Indian Country Land
All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (2) all dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (40 CFR §122.2)

Indian Tribe
Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian Reservation (40 CFR §122.2).

Infeasible
Not technologically possible, or not economically practicable and achievable in light of best industry practices. (40 CFR §450.11(b)).

Large Construction Activity
Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities.)

Linear Project
Includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.
Low Rainfall Erosivity Waiver (LREW) - A written submission to the executive director from an operator of a construction site that is considered as small construction activity under the permit, which qualifies for a waiver from the requirements for small construction activities, only during the period of time when the calculated rainfall erosivity factor is less than five (5).

Minimize
To reduce or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable considering best industry practices.

Municipal Separate Storm Sewer System (MS4)
A separate storm sewer system owned or operated by the United States, a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, that discharges to surface water in the state.

Notice of Change (NOC)
Written notification to the executive director from a discharger authorized under this permit, providing changes to information that was previously provided to the agency in a notice of intent form.

Notice of Intent (NOI)
A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT)
A written submission to the executive director from a discharger authorized under this general permit requesting termination of coverage.

Operator
The person or persons associated with a large or small construction activity that is either a primary or secondary operator as defined below:

Primary Operator
the person or persons associated with a large or small construction activity that meets either of the following two criteria:

a) the person or persons have on-site operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
b) the person or persons have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Secondary Operator
The person or entity, often the property owner, whose operational control is limited to:

a) the employment of other operators, such as a general contractor, to perform or supervise construction activities; or
b) the ability to approve or disapprove changes to construction plans and specifications, but who does not have day-to-day on-site operational control over construction activities at the site.

Secondary operators must either prepare their own SWP3 or participate in a shared SWP3 that covers the areas of the construction site, where they have control over the construction plans and specifications.

If there is not a primary operator at the construction site, then the secondary operator is defined as the primary operator and must comply with the requirements for primary operators.

Outfall
For the purpose of this permit, a point source at the point where stormwater runoff associated with construction activity discharges to surface water in the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other water of the U.S. and are used to convey waters of the U.S.

Permittee
An operator authorized under this general permit. The authorization may be gained through submission of a notice of intent, by waiver, or by meeting the requirements for automatic coverage to discharge stormwater runoff and certain non-stormwater discharges from construction activity.

Point Source
Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR §122.2).

Pollutant
Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any surface water in the state. The term "pollutant" does not include tail water or runoff

water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland. For the purpose of this permit, the term "pollutant" includes sediment.

Pollution
The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose (Texas Water Code (TWC) §26.001(14)).

Rainfall Erosivity Factor (R factor)
the total annual erosive potential that is due to climatic effects and is part of the Revised Universal Soil Loss Equation (RUSLE).

Receiving Water
A "Water of the United States" as defined in 40 CFR §122.2 or a surface water in the state into which the regulated stormwater discharges.

Semiarid Areas
areas with an average annual rainfall of 10 to 20 inches.

Separate Storm Sewer System
A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), designed or used for collecting or conveying stormwater; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

Small Construction Activity
Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities).

Steep Slopes
Where a state, Tribe, local government, or industry technical manual (e.g. stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

Stormwater (or Stormwater Runoff)
Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity
Stormwater runoff, as defined above, from a construction activity.

Structural Control (or Practice)
A pollution prevention practice that requires the construction of a device, or the use of a device, to reduce or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: silt fences, earthen dikes, drainage swales, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State
Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Temporary Stabilization
A condition where exposed soils or disturbed areas are provided a protective cover or other structural control to prevent the migration of pollutants. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either permanent stabilization can be achieved or until further construction activities take place.

Thawing Conditions
for the purposes of this permit, thawing conditions are expected based on the historical likelihood of two or more days with daytime temperatures greater than 32℉. This date can be determined by looking at historical weather data.
Note: The estimation of thawing conditions is for planning purposes only. During construction, the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

Total Maximum Daily Load (TMDL)
The total amount of a pollutant that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Turbidity
A condition of water quality characterized by the presence of suspended solids and/or organic material.

Waters of the United States
Waters of the United States or waters of the U.S. means:

a) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
b) all interstate waters, including interstate wetlands;
c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
    1) which are or could be used by interstate or foreign travelers for recreational or other purposes;
    2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    3) which are used or could be used for industrial purposes by industries in interstate commerce;
d) all impoundments of waters otherwise defined as waters of the United States under this definition;
e) tributaries of waters identified in paragraphs (a) through (d) of this definition;
f) the territorial sea; and
g) wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the U.S. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the U.S. (such as disposal area in wetlands) nor resulted from the impoundment of waters of the U.S. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.

PROJECT AND RESPONSIBLE PARTIES INFORMATION

PROJECT NAME AND LOCATION

UP Englewood Yard North Bypass
5500 Wallisville Road
Houston, TX 77020

SECONDARY OPERATOR/OWNER NAME AND CONTACT INFORMATION

Union Pacific Railroad
1400 Douglas Street
Omaha, NE 68179

James Mross, U.P. Construction Manager
402.250.5375

PRIMARY OPERATOR NAME AND CONTACT INFORMATION

W.T. Byler Company, Inc.
15203 Lillja Road
Houston, TX 77060

Luis Ramirez, Project Manager
281.445.2070

UNION PACIFIC ENVIRONMENTAL CONTACT INFORMATION

Union Pacific Railroad
4823 N 119th Street
Milwaukee, WI 53225

Kevin Peterburs, UPRR Environmental Site Remediation Manager
414.267.4164

AUTHORIZED SWPPP DELEGATE CONTACT INFORMATION

Construction EcoServices
13810 Hollister Road, Suite 100
Houston, TX 77086

Robert C. Adair, President
832.456.1000

SITE LOCATION

The construction site is located at 5500 Wallisville Road, within the Houston city limits in Central Harris County, running along the existing railroad tracks to serve the Union Pacific Englewood Yard, approximately running Northwest from the Eastex Freeway to Dabney Street.

KEY MAP: 494 E, F, B, C, D / 454 Z

	Start:	End:
• Latitude:	29.776941◦ N	29.790107◦ N
• Longitude:	-95.341131◦ W	-95.310144◦ W

SITE AREA ESTIMATES

The total area of the entire property is 368 acres. The area to be disturbed, which may generally include off-site material storage areas, overburden and stockpiles of dirt, and borrow areas, and may be authorized under the permittee's NOI, is approximately 4.3 acres.

EXISTING CONDITIONS

The area to be disturbed is a relatively flat parcel of land located within an industrial development area with existing railroad tracks and an existing drainage swale vegetated with grass, bushes, and small trees.

RUNOFF FACTORS

The project site lies within Harris County. According to the Soil Report provided by HDR and Web Soil Survey, the soil on this site is described as loam, clay loam, plastic clay, lean clay, and silty sand with clay soils being lime stabilized and granular soils stabilized with fly ash or a lime-fly ash mix.

Map Unit Symbol	Map Unit Name
Mu	Verland-Urban land complex, 0 to 1 percent slopes
URLX	Urban land

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: https://websoilsurvey.sc.egov.usda.gov/. Accessed [June 25, 2021].

The Pre-construction Runoff Coefficient "C" for the site is:

- 0.35

The Weighted Runoff Coefficient "C" for the overall project after construction, including utilized and reserved areas, is calculated as:

- 0.35

CONSTRUCTION ACTIVITY

This project entails the dirt work and construction of new railroad tracks to serve the existing Union Pacific Englewood Yard, with associated drainage, roadway, and electrical infrastructure.

INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITY

The Construction Schedule for this project can be found in this section.

CONSTRUCTION SCHEDULE

INSERT CONSTRUCTION SCHEDULE HERE

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MAJOR GRADING AND OTHER SITEWORK ACTIVITIES

Notations as to ongoing grading and other site work activities can also be found in both the weekly SWPPP Inspection Reports and in the Project Superintendent's daily report on the status of this project and may be referenced therein as a part of the documentary record called for by TXR150000.

ACTIVITY	BEGIN DATE	END DATE
Demolition		
Clearing		
Rough Grade		
Underground Utilities		
Pad Preparation		
Paving Preparation		
Concrete Placement		
Construction Activities Temporarily or Permanently Ceased (if applicable)		
Final Grading		
Landscaping		
Final Stabilization		

GENERAL LOCATION MAP

Site location maps are located behind this page. If new site locations are identified later during construction, the location maps and this SWPPP will be revised as appropriate.

SITE PLANS

All available site plans and related engineer's construction drawings, which provide information on site conditions, drainage and stabilization, are located behind this page. In general, these drawings (to the extent applicable and practicable) include the following:

- drainage patterns and approximate slopes anticipated after major grading activities
- areas where soil disturbance will occur
- locations of all major structural controls either planned or in place
- locations where temporary or permanent stabilization practices are expected to be used
- locations of construction support activities, including off-site activities, that are authorized under the permittee's NOI, including material, waste, borrow, fill, or equipment storage areas
- surface waters (including wetlands) either at, adjacent, or in close proximity to the site
- locations where Stormwater discharges from the site directly to a surface water body or a municipal separate storm sewer system; and
- Vehicle wash areas

If new construction drawings are made available later during construction, relevant drawings will be added to this section and this SWPPP will be revised as appropriate.

RECEIVING WATERS, WETLANDS AND SPECIAL AQUATIC SITES

This project is located in the Houston Ship Channel/Buffalo Bayou Tidal (Segment #1007) watershed, which ultimately receives stormwater runoff from the site through the existing storm drainage system and then to Hunting Bayou Above Tidal (Segment #1007R) watershed.

No existing wetlands or other special aquatic sites have been identified at or near this site. However, if any are discovered, this SWPPP will be revised to reflect such information.

SUPPORT FACILITIES

Offsite support for this project will be provided by the following vendors/sources. These facilities are not covered under this Operator's permit.

Concrete
The specific batch plant, certain only on the day of any particular pour, can be identified by contacting:

Company/Contact/Phone Number: _____

Select Fill/Soil
Will be sourced from:

Company/Contact/Phone Number: _____

Asphalt
Will be provided by the company indicated below. The specific batch plant can be identified by contacting:

Company/Contact/Phone Number: _____

INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION

There will be no discharge at this site that is associated with any activity other than construction.

ENDANGERED OR THREATENED SPECIES OR CRITICAL HABITATS

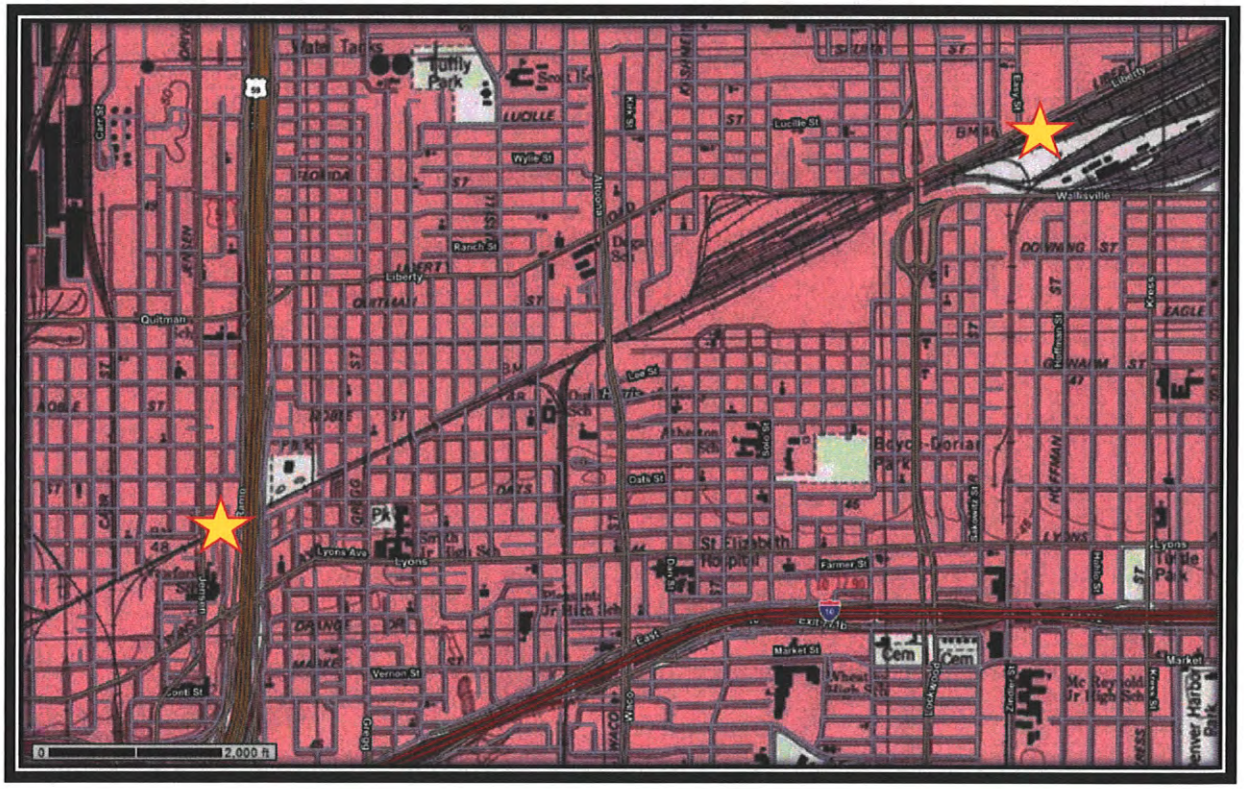
No endangered or threatened species or critical habitats are known to exist at this site. However, if any are discovered, this SWPPP will be revised to reflect such information.

HISTORIC PLACES

No historic sites are known to exist at this site. However, if any historic sites are discovered, this information will be revised to reflect such information.

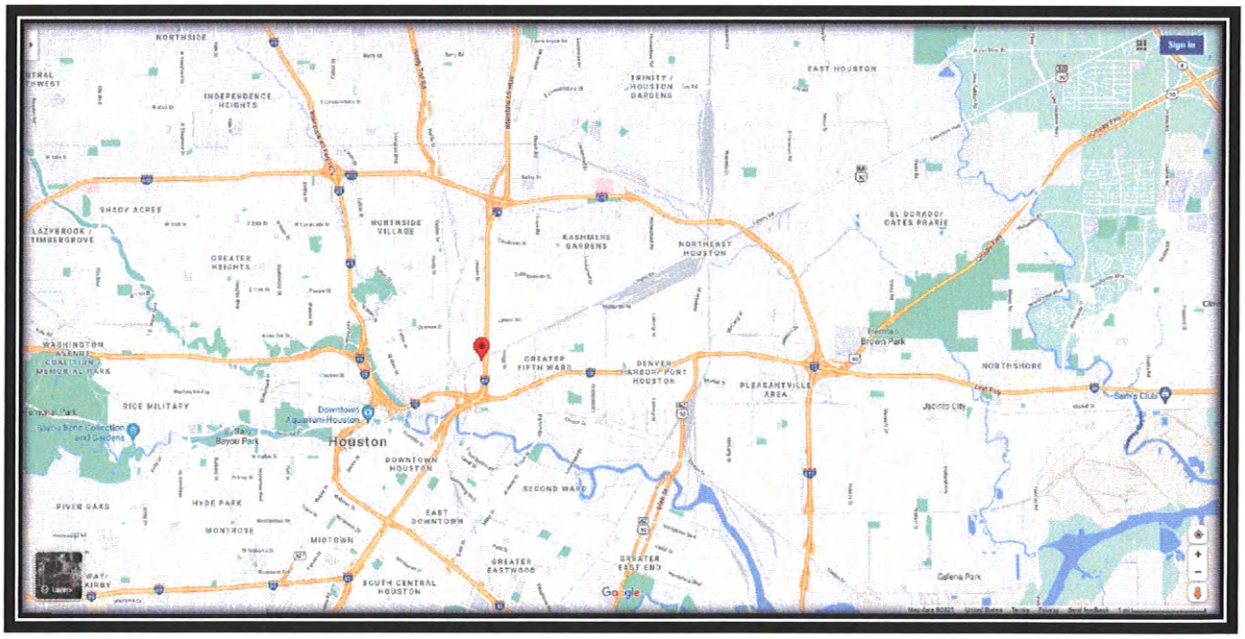
SITE LOCATION MAPS



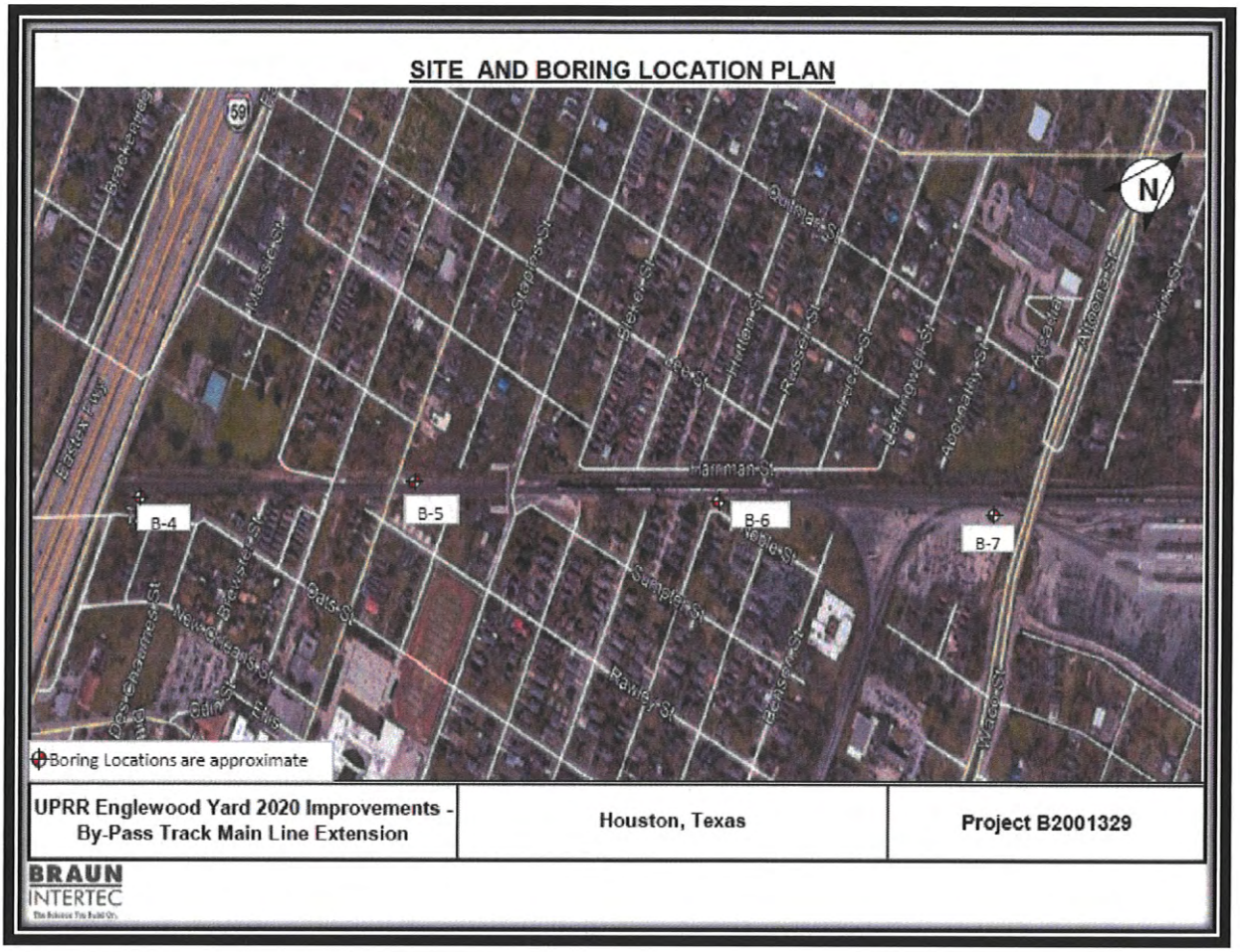


SITE LOCATION MAPS

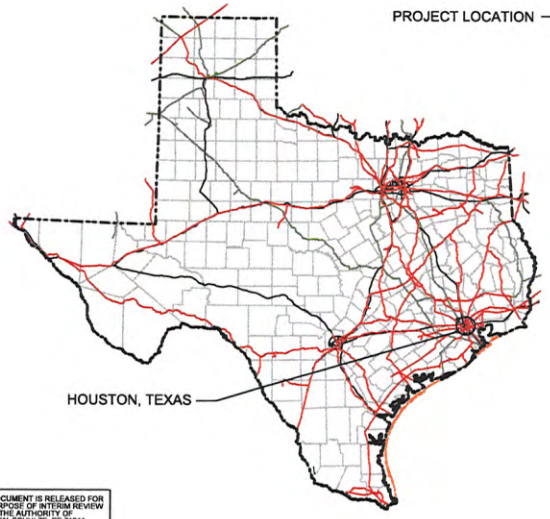


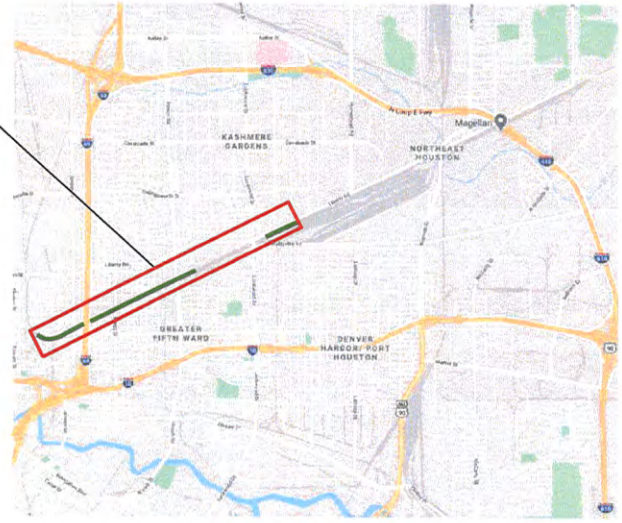


WEB SOIL SURVEY MAP



ENGINEERING DESIGN





THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF DENNIS W. SCHULZE, PE 71211. IT IS NOT TO BE USED FOR CONSTRUCTION OR PERMIT PURPOSES.

HDR

TEXAS P.E. FIRM REGISTRATION NO. F-754

State of Texas

Project Location Map

Not to Scale

HOUSTON, TX - HARRIS COUNTY
HOUSTON SUBDIVISION MP 357.0 TO MP 360.65
ENGLEWOOD YARD - NORTH BYPASS

ISSUED FOR BIDDING (IFB)

NOT FOR CONSTRUCTION

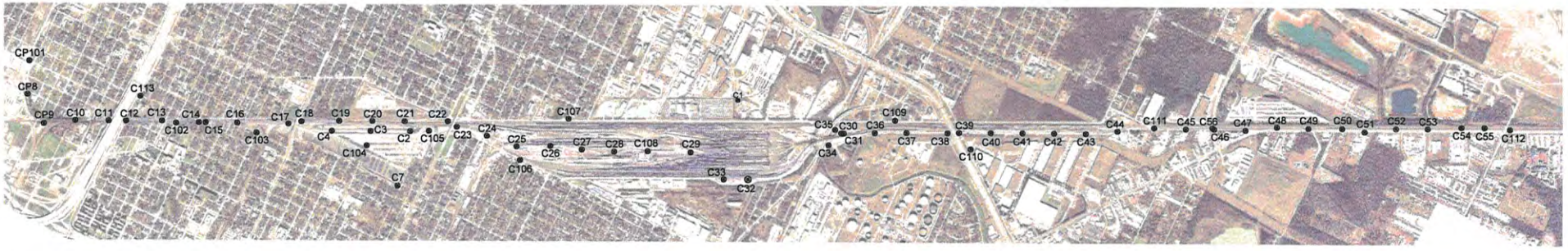
LAST REVISED:
MARCH 24, 2021

WORK ORDER: 52247
PROJECT NUMBER: 113382
BUDGET REFERENCE: 19CP310

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	13857894.47	3143290.645	42.119	5/8 RB
2	13853292.97	3136370.603	48.002	PK NAIL
3	13852825.87	3135486.416	47.826	PK NAIL
4	13852369.34	3134623.112	46.192	PK NAIL
5	13862661.83	3144848.982	43.951	5/8 RB
6	13862879.43	3144953.698	43.348	5/8 RB
7	13851926.53	3136737.636	46.224	5/8 RB
8	13849584.43	3127396.629	46.964	5/8 RB
9	13849118.27	3128113.780	48.485	PK NAIL
10	13849562.38	3128779.225	45.480	5/8 RB
11	13849949.50	3129526.501	46.886	5/8 RB
12	13850152.06	3129920.236	46.307	5/8 RB
13	13850580.79	3130717.549	46.561	5/8 RB
14	13850980.90	3131558.568	47.379	PK NAIL
15	13851061.52	3131709.376	47.587	PK NAIL
16	13851428.30	3132420.396	46.611	5/8 RB
17	13852016.16	3133567.714	47.201	5/8 RB
18	13852221.18	3133831.702	46.199	5/8 RB
19	13852682.16	3134667.261	46.641	PK NAIL
20	13853072.92	3135408.074	46.943	PK NAIL
21	13853452.18	3136127.980	47.983	PK NAIL
22	13853965.36	3137089.874	46.984	PK NAIL
23	13853945.29	3137355.882	45.414	5/8 RB
24	13854105.69	3138131.213	44.719	5/8 RB
25	13854219.81	3138920.326	45.301	PK NAIL
26	13854632.25	3139666.577	44.422	PK NAIL
27	13854929.04	3140409.283	46.514	PK NAIL

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
28	13855266.70	3141155.099	48.180	CHISELED X FH MUELLER BOLT
29	13856157.54	3142867.546	44.882	5/8 RB
30	13858383.21	3145993.054	63.850	5/8 RB
31	13858407.75	3146049.331	64.075	CHISELED X SE COR PAD
32	13856239.67	3144465.372	43.979	PK NAIL
33	13855952.07	3143923.365	44.329	PK NAIL
34	13857963.36	3145851.609	39.413	5/8 RB
35	13858386.47	3145816.193	40.456	5/8 RB
36	13858789.85	3146735.488	42.133	5/8 RB
37	13859168.59	3147440.323	39.116	5/8 RB
38	13859655.68	3148357.044	38.054	5/8 RB
39	13859799.21	3148608.553	38.345	5/8 RB
40	13860172.92	3149315.722	39.388	5/8 RB
41	13860547.49	3150022.744	39.759	5/8 RB
42	13860920.23	3150730.823	40.511	5/8 RB
43	13861289.08	3151440.742	40.755	5/8 RB
44	13861723.70	3152117.563	41.352	5/8 RB
45	13862589.01	3153612.912	41.598	PK NAIL
46	13862924.70	3154245.513	43.829	PK NAIL
47	13863274.34	3154954.533	41.640	PK NAIL
48	13863722.36	3155617.483	42.108	5/8 RB
49	13864069.23	3156334.381	39.382	5/8 RB
50	13864470.89	3157090.320	40.404	5/8 RB
51	13864663.60	3157629.557	40.042	PK NAIL
52	13865113.18	3158290.963	38.219	5/8 RB
53	13865490.53	3158996.440	37.935	5/8 RB
54	13865925.64	3159733.266	41.837	PK NAIL

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
55	13866200.59	3160248.784	40.337	5/8 RB
56	13862933.45	3154189.952	42.892	DEPT HWY 4" BC
101	13850362.71	3127036.554	45.855	PK NAIL PANEL
102	13850700.78	3131057.667	47.038	PK NAIL STRIPE
103	13851435.47	3132965.313	42.417	MH CENTER
104	13852454.64	3135571.385	46.543	PK NAIL NW COR RED BOX
105	13853523.54	3136784.654	46.450	SW COR CONC PAD
106	13853955.74	3139159.945	43.560	SIDEWALK CORNER
107	13855460.86	3139747.705	44.151	MH CENTER
108	13855675.28	3141895.363	45.309	INSIDE COR L
109	13859310.57	3147038.086	40.000	MH CENTER
110	13859571.64	3149063.168	37.632	NW COR SIDEWALK
111	13862237.97	3152894.055	43.767	PK NAIL SE COR STRIPE
112	13866458.60	3160842.542	38.130	PK NAIL PANEL
113	13850883.57	3129937.907	43.598	PK NAIL PANEL



SURVEY INFORMATION PROVIDED BY ATLANTIC AND DISPLAYED BY HDR

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HDR
TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY: LAK
CHECKED BY: ACS
DATE: 24 MAR 2021
SHEET NUMBER: G006 of G007

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: CONTROL POINTS

DRAWING FILE: EY_NB_G006

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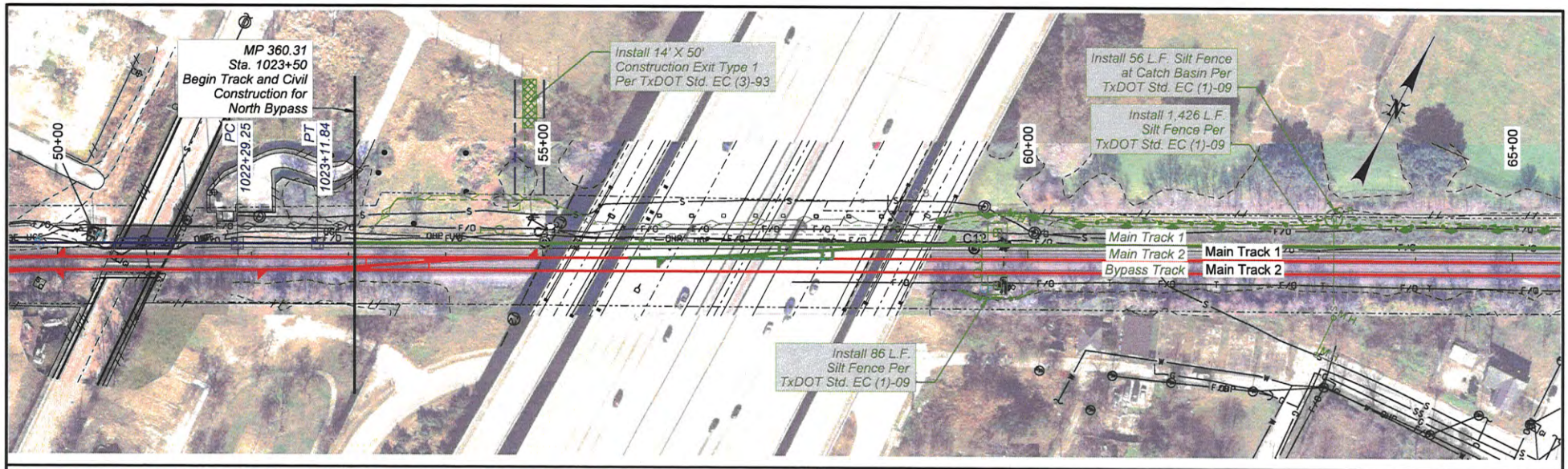

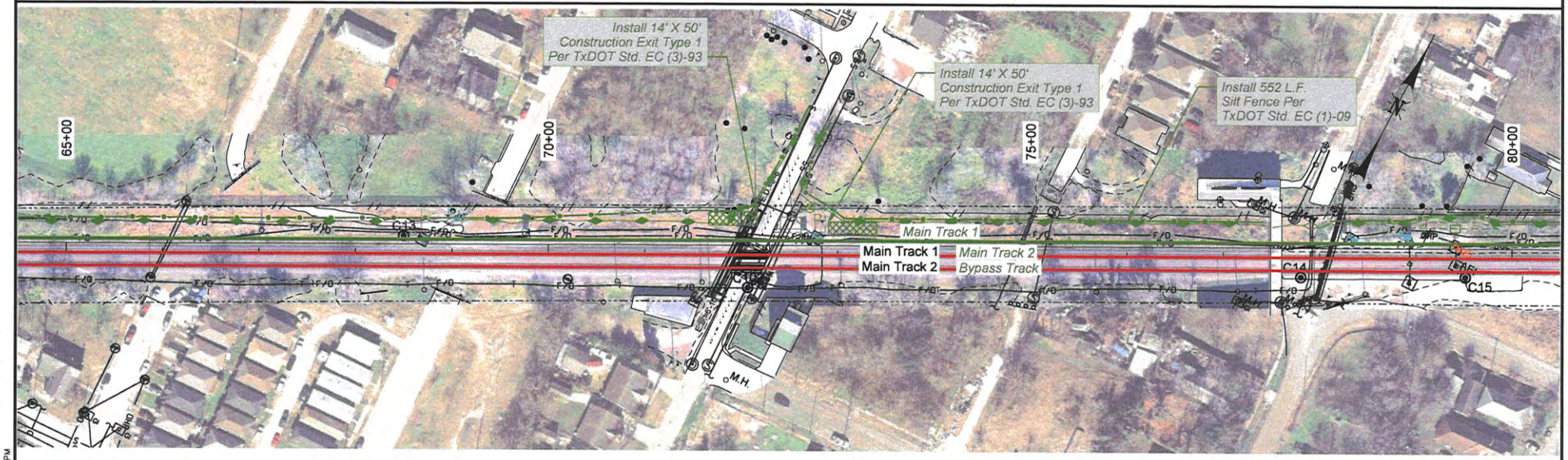

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HDR
TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	JNS
CHECKED BY:	ACS
DATE:	24 MAR 2021
SHEET NUMBER	EC02 of EC05

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: EROSION CONTROL PLANS

DRAWING FILE: EY_NB_EC02

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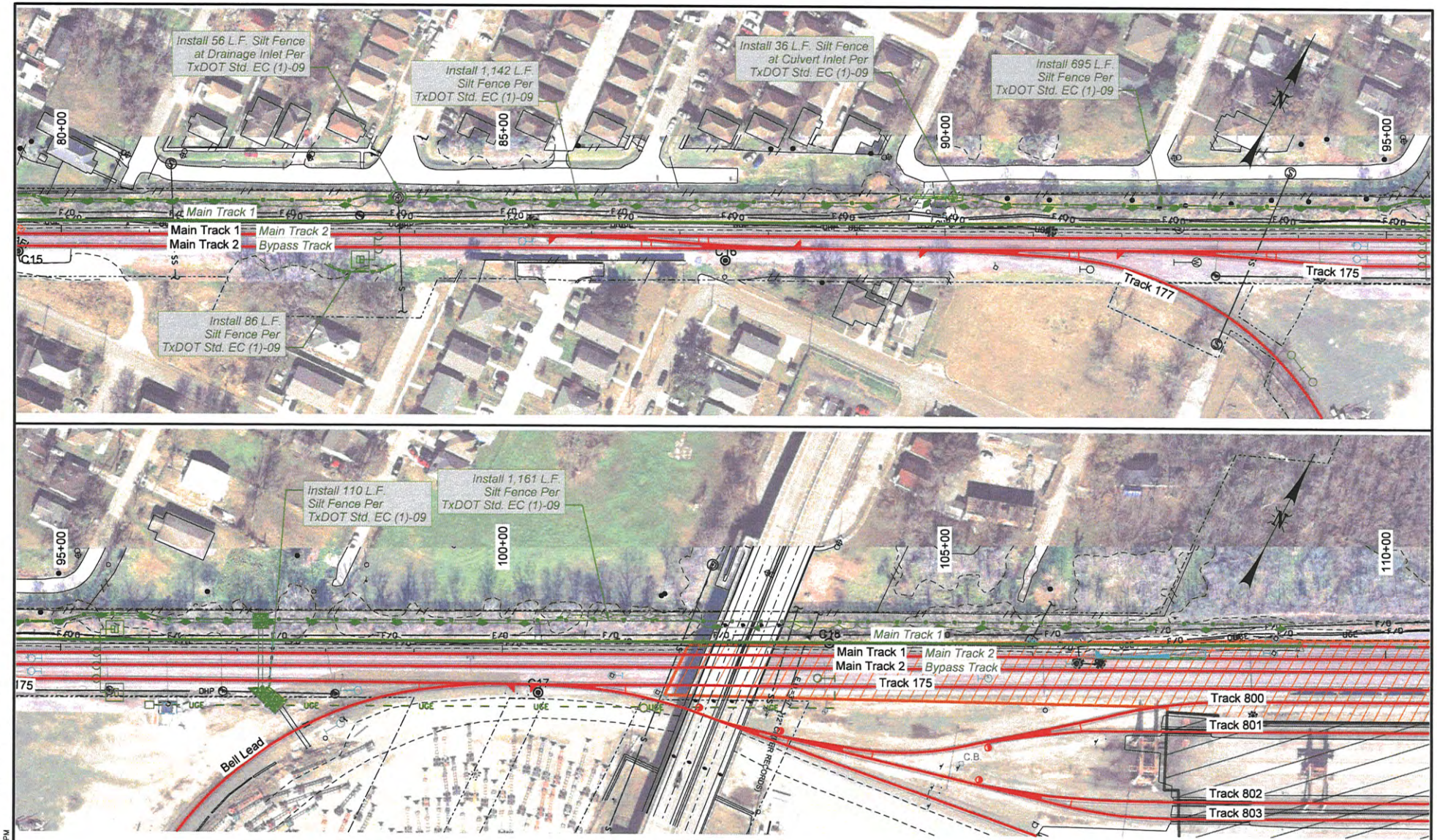

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TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	JNS
CHECKED BY:	ACS
DATE:	24 MAR 2021
SHEET NUMBER:	EC03 of EC05

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: EROSION CONTROL PLANS

DRAWING FILE: EY_NB_EC03

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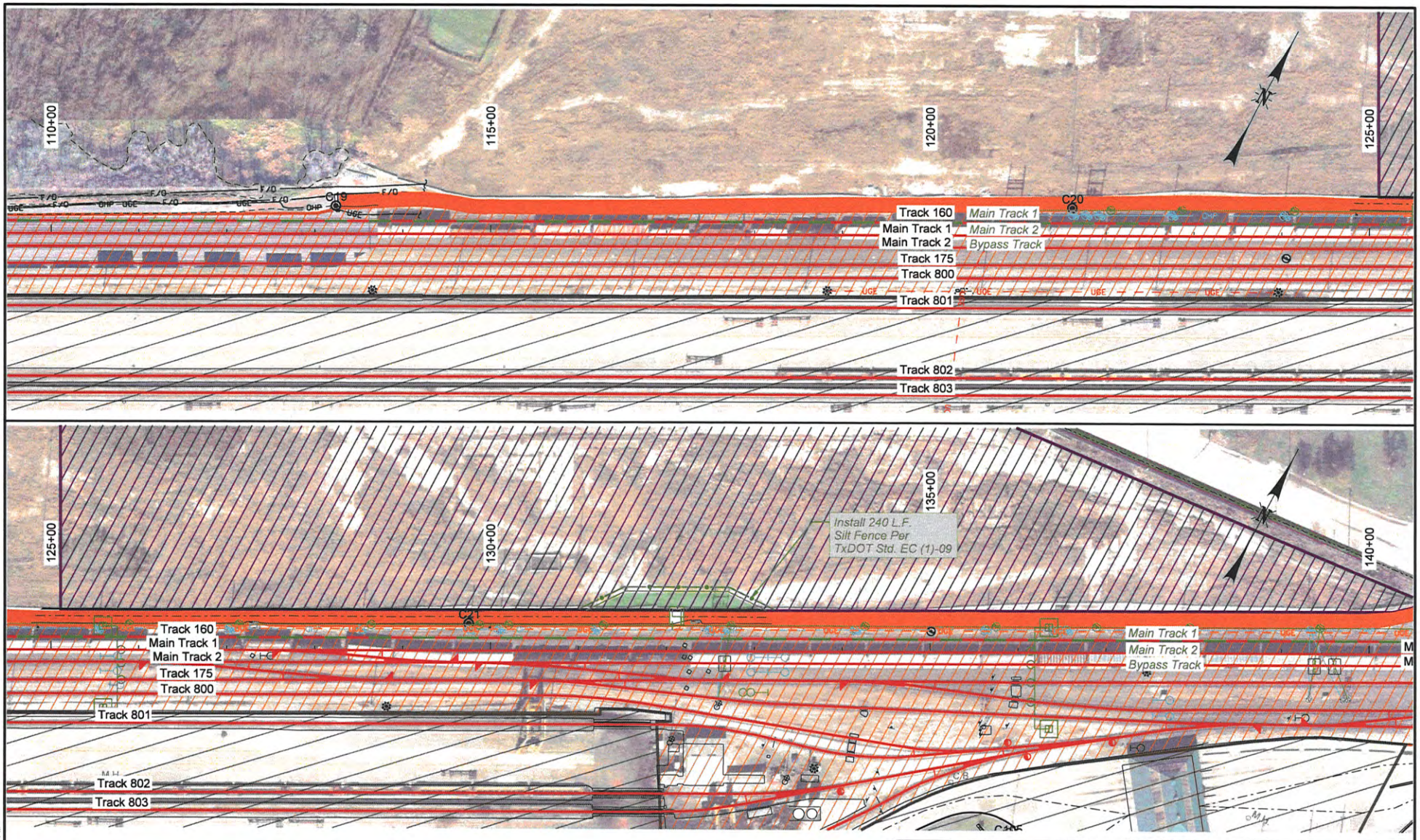

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TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	JNS
CHECKED BY:	ACS
DATE:	24 MAR 2021
SHEET NUMBER	EC04 of EC05

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: EROSION CONTROL PLANS

DRAWING FILE: EY_NB_EC04

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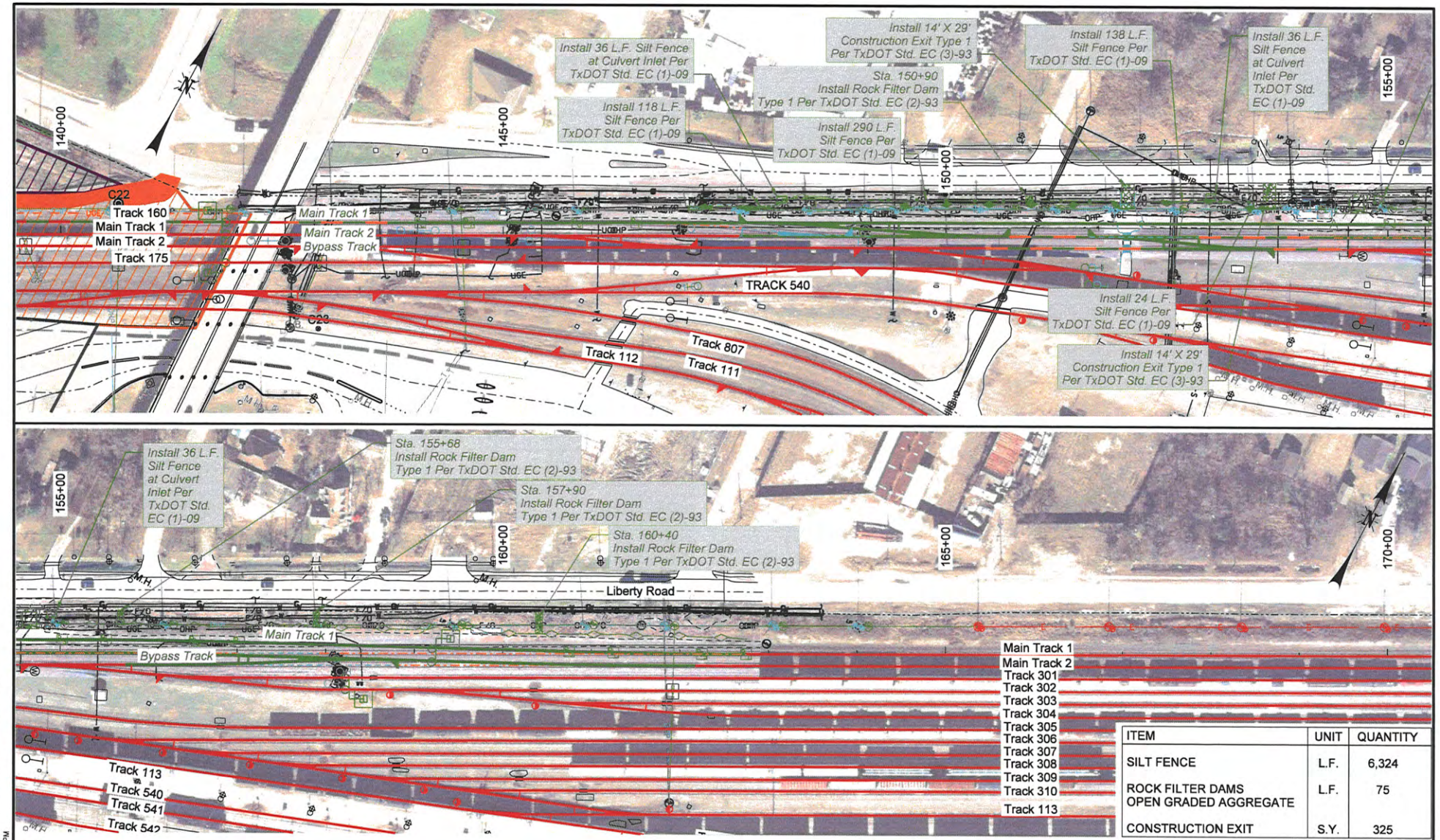

ITEM	UNIT	QUANTITY
SILT FENCE	L.F.	6,324
ROCK FILTER DAMS OPEN GRADED AGGREGATE	L.F.	75
CONSTRUCTION EXIT	S.Y.	325

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY: JNS
CHECKED BY: ACS
DATE: 24 MAR 2021
SHEET NUMBER: EC05 of EC05

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: EROSION CONTROL PLANS

DRAWING FILE: EY_NB_EC05

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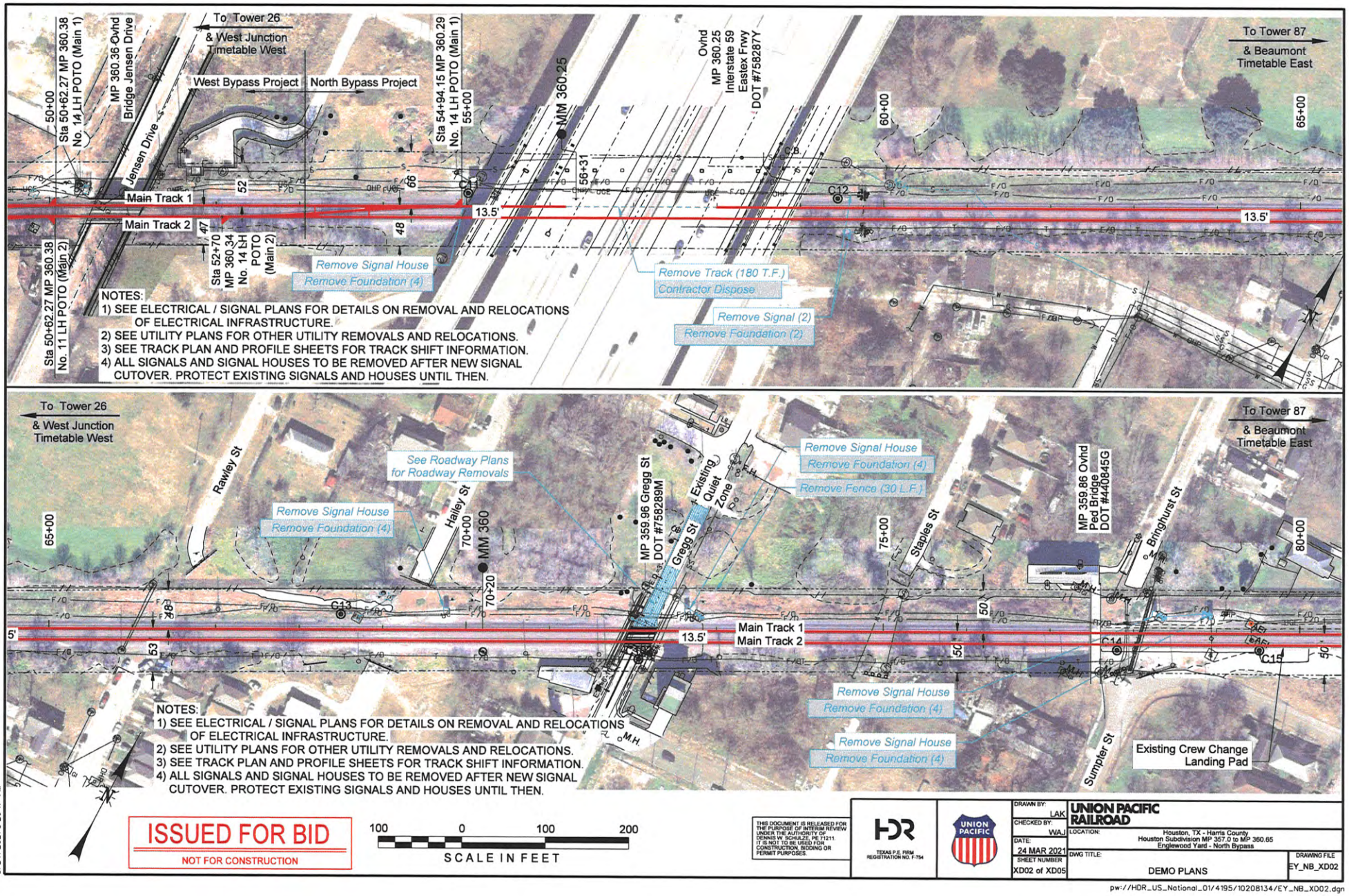

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HDR
TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY	WAJ
DATE:	24 MAR 2021
SHEET NUMBER	XD02 of XD05

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: DEMO PLANS

DRAWING FILE: EY_NB_XD02

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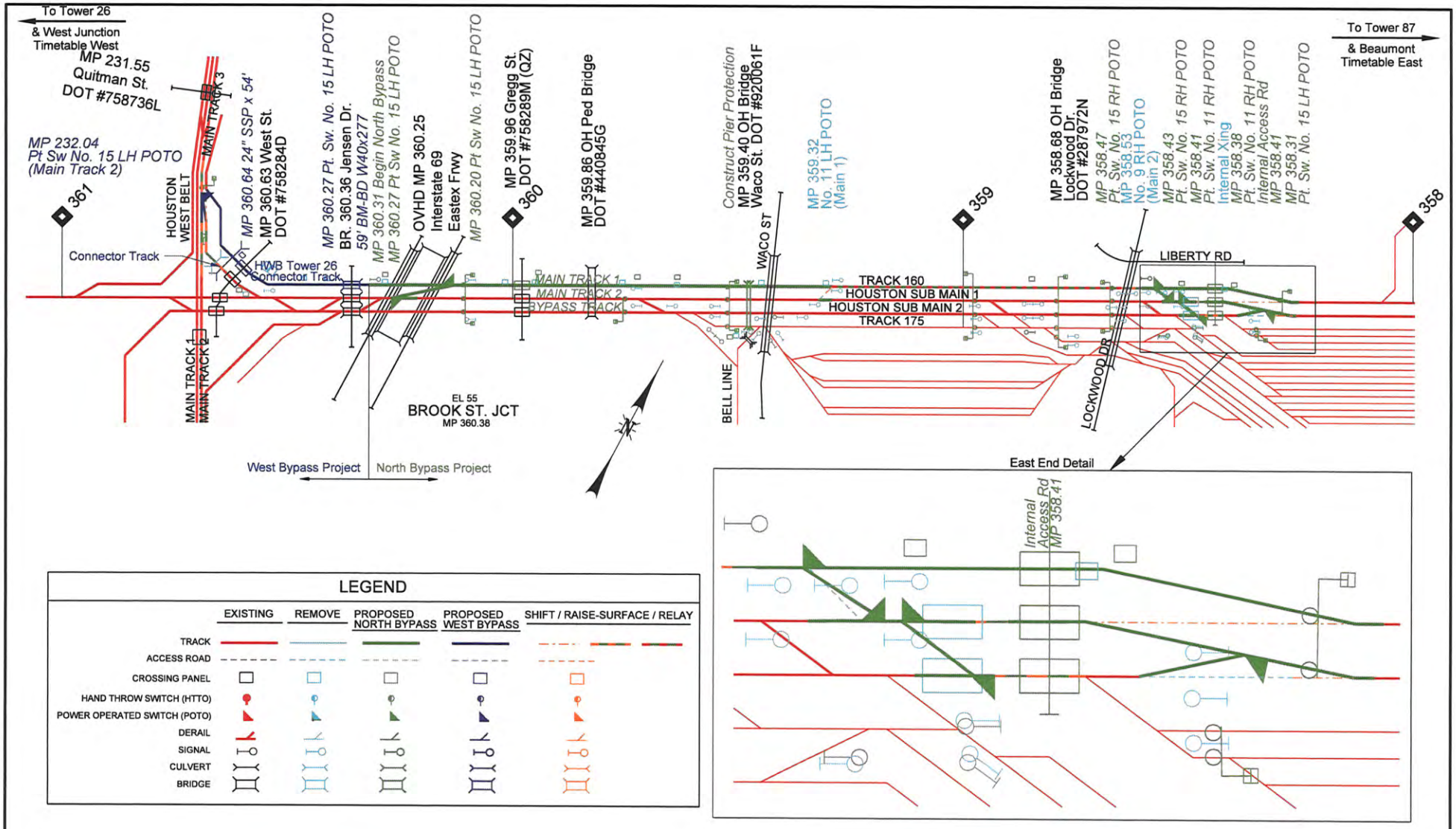

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TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	ACS
DATE:	24 MAR 2021
SHEET NUMBER	G007 of G007

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: GENERAL OVERVIEW MAP

DRAWING FILE: EY_NB_G007

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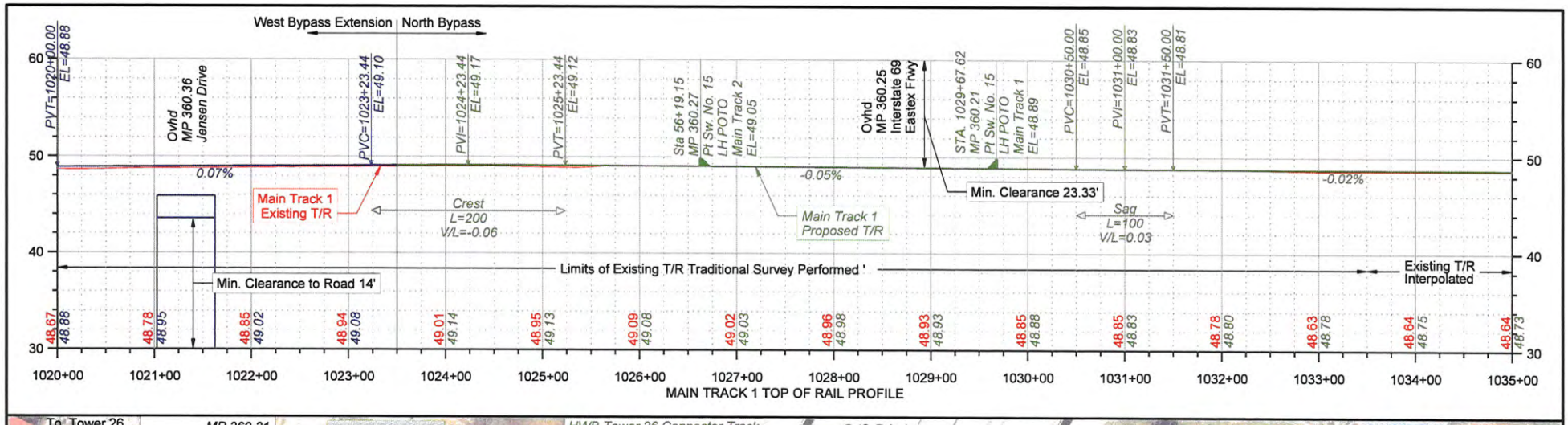

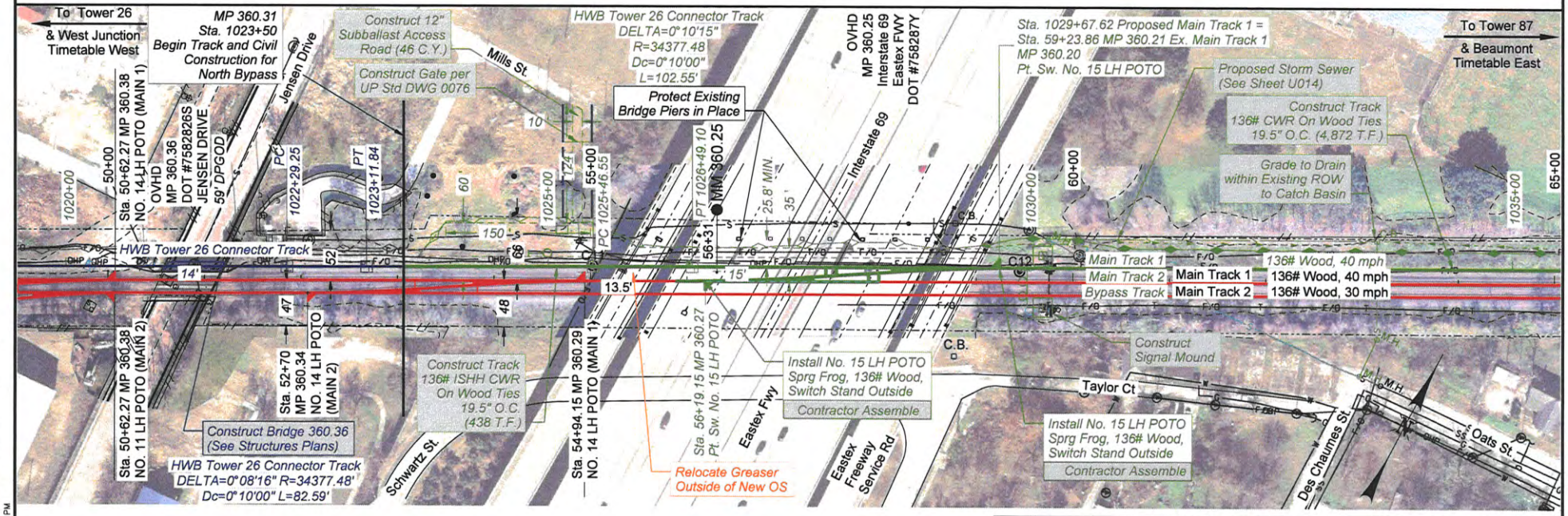

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	WAJ
DATE:	24 MAR 2021
SHEET NUMBER:	P003 of P013

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: TRACK PLAN AND PROFILE MAIN TRACK 1

DRAWING FILE: EY_NB_P003

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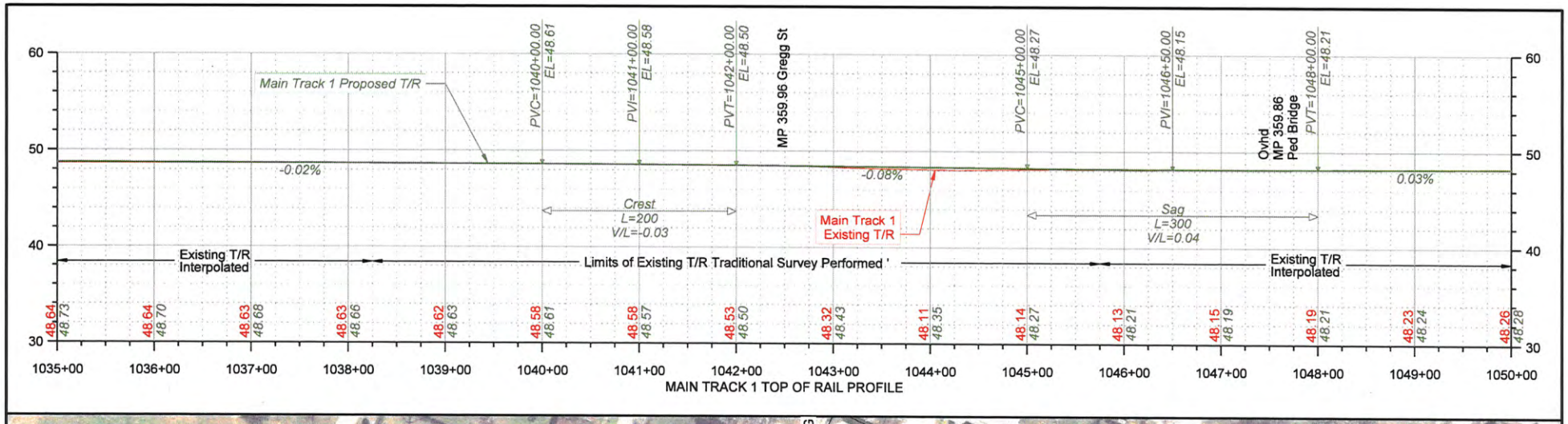

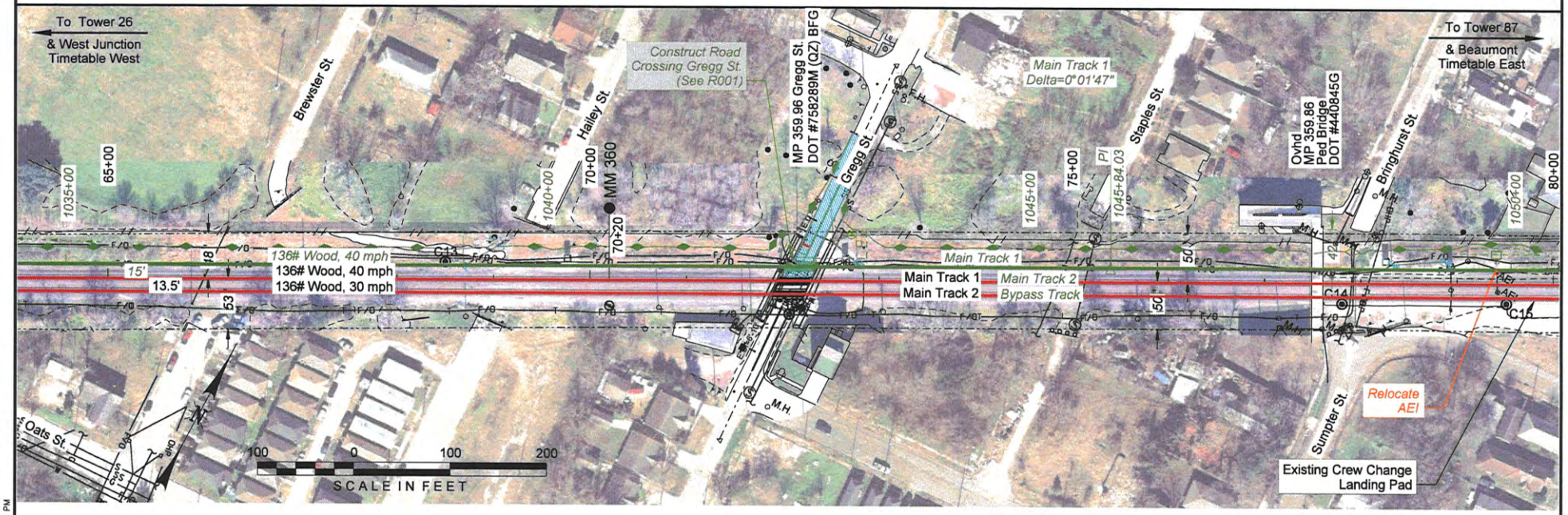

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY: LAK	UNION PACIFIC RAILROAD
CHECKED BY: WAJ	LOCATION: Houston, TX - Harris County; Houston Subdivision MP 357.0 to MP 360.65; Englewood Yard - North Bypass
DATE: 24 MAR 2021	DWG TITLE: TRACK PLAN AND PROFILE MAIN TRACK 1
SHEET NUMBER P004 of P013	DRAWING FILE EY_NB_P004

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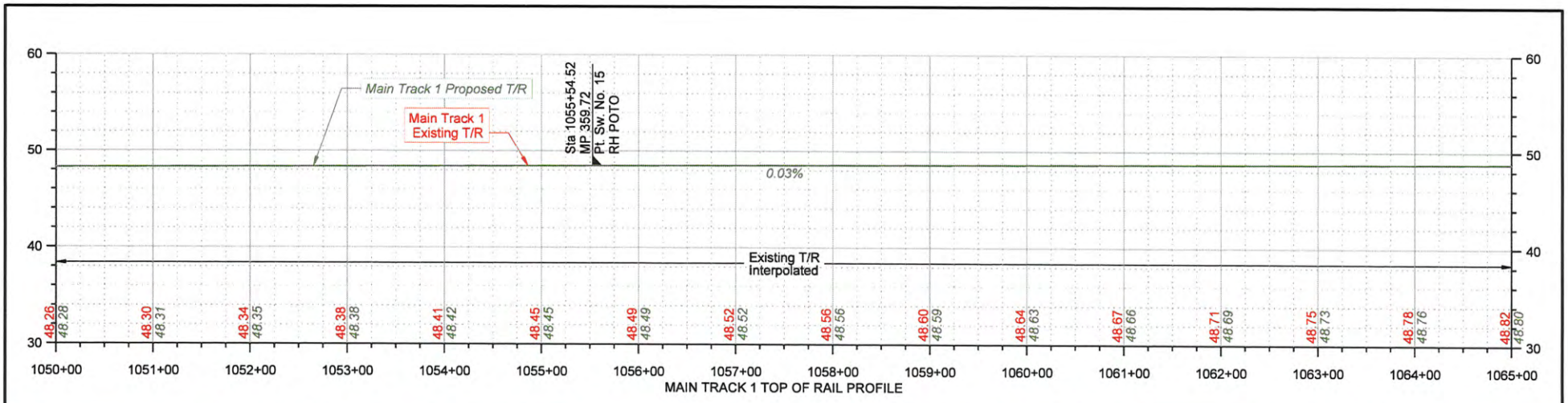

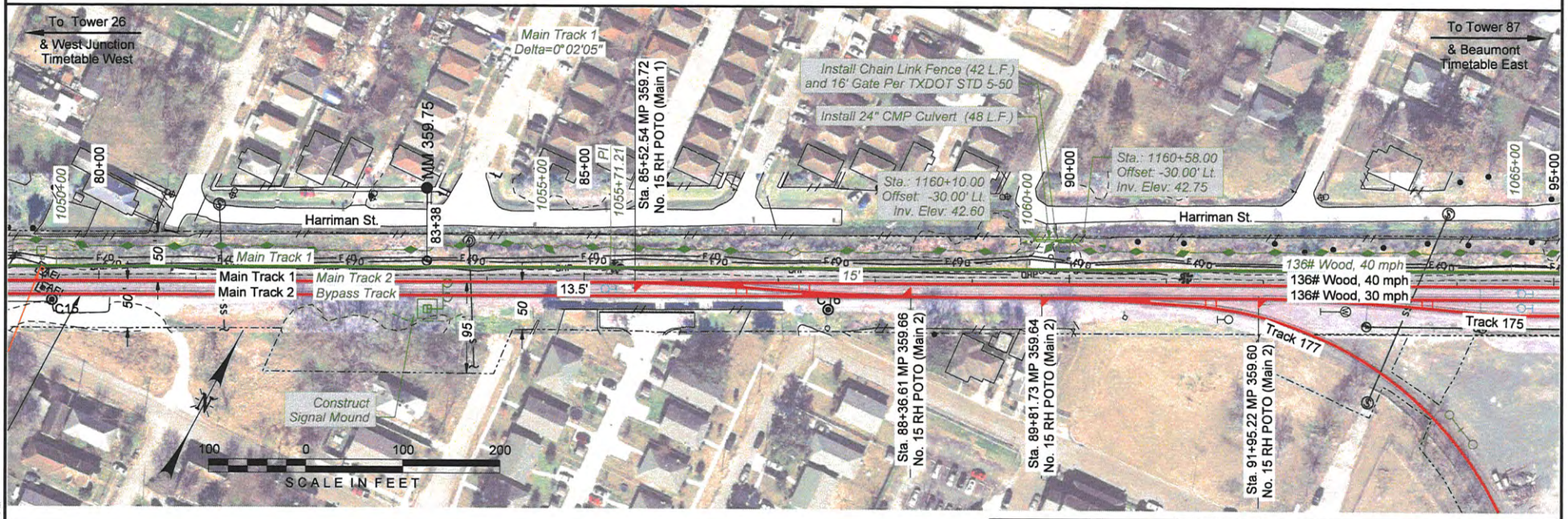

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HDR
TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	WAJ
DATE:	24 MAR 2021
SHEET NUMBER	P005 of P013

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: TRACK PLAN AND PROFILE
MAIN TRACK 1

DRAWING FILE: EY_NB_P005

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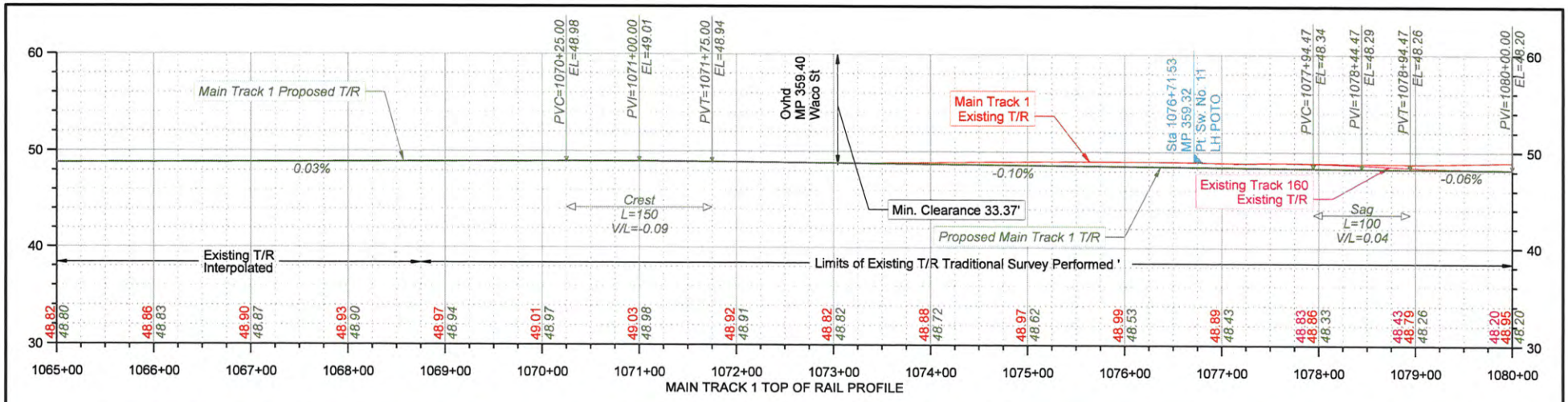

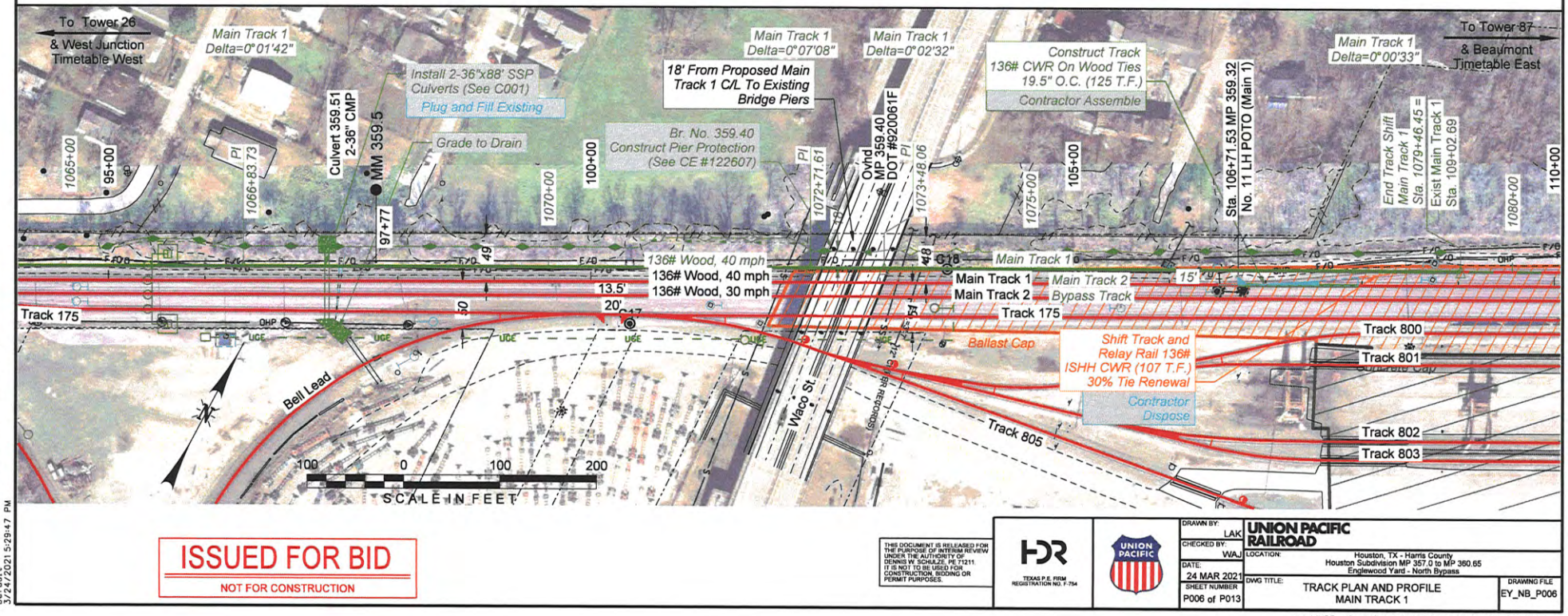

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	WAJ
DATE:	24 MAR 2021
SHEET NUMBER	P006 of P013

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: TRACK PLAN AND PROFILE MAIN TRACK 1

DRAWING FILE: EY_NB_P006

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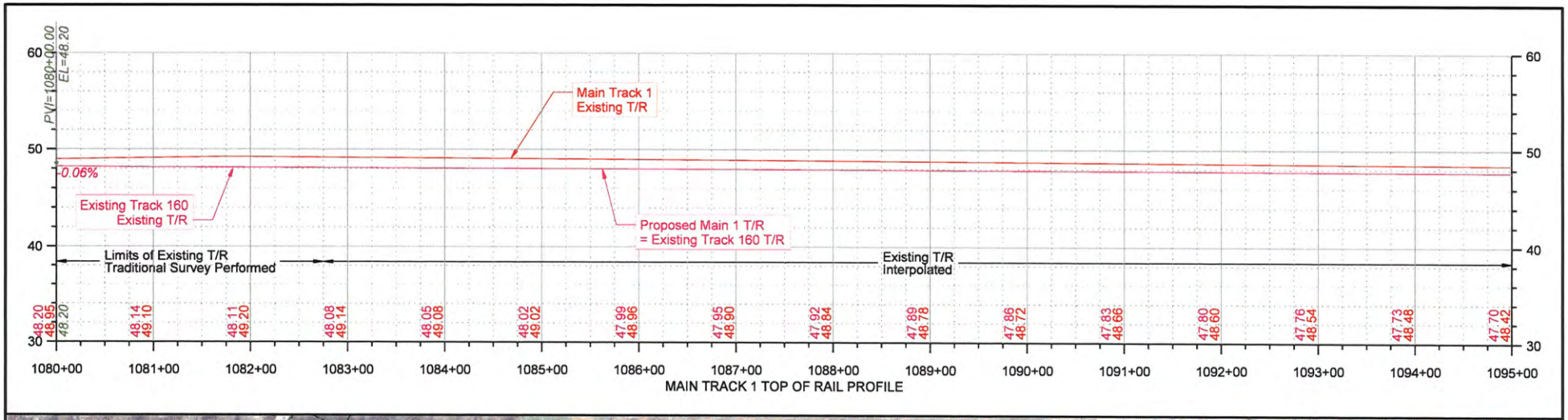

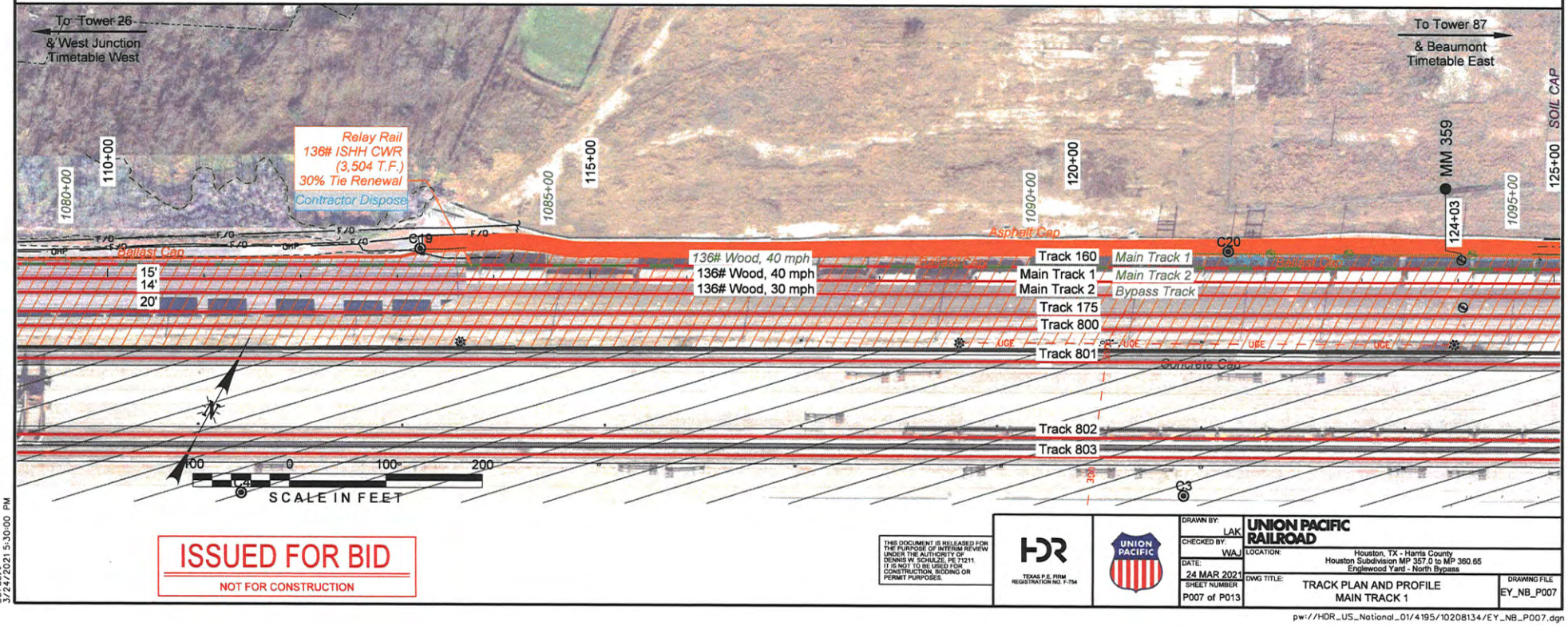

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	WAJ
DATE:	24 MAR 2021
SHEET NUMBER	P007 of P013

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: TRACK PLAN AND PROFILE
MAIN TRACK 1

DRAWING FILE: EY_NB_P007

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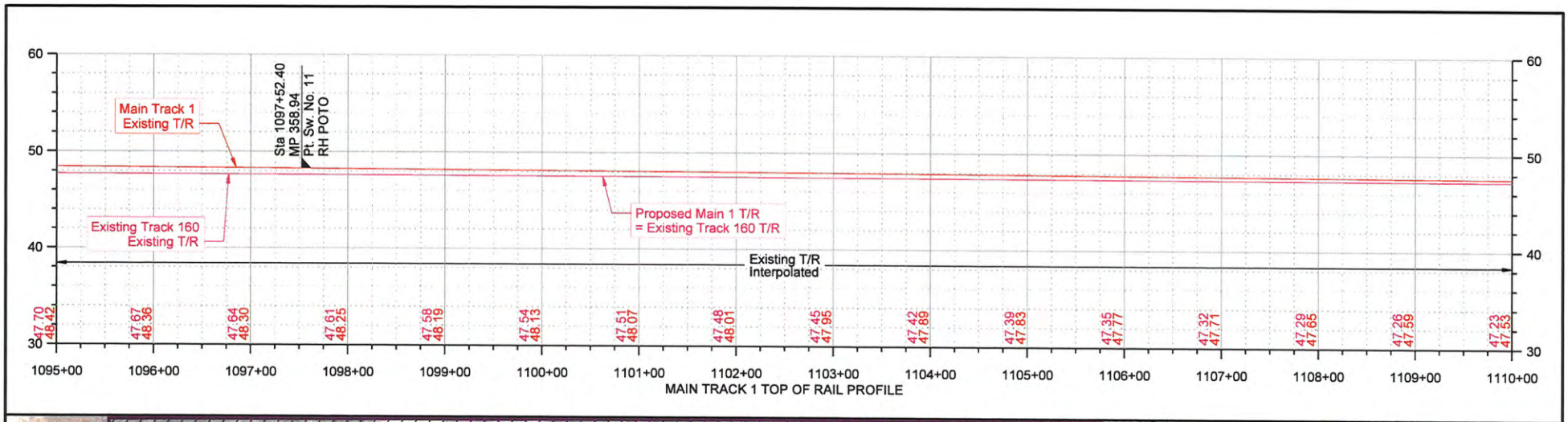

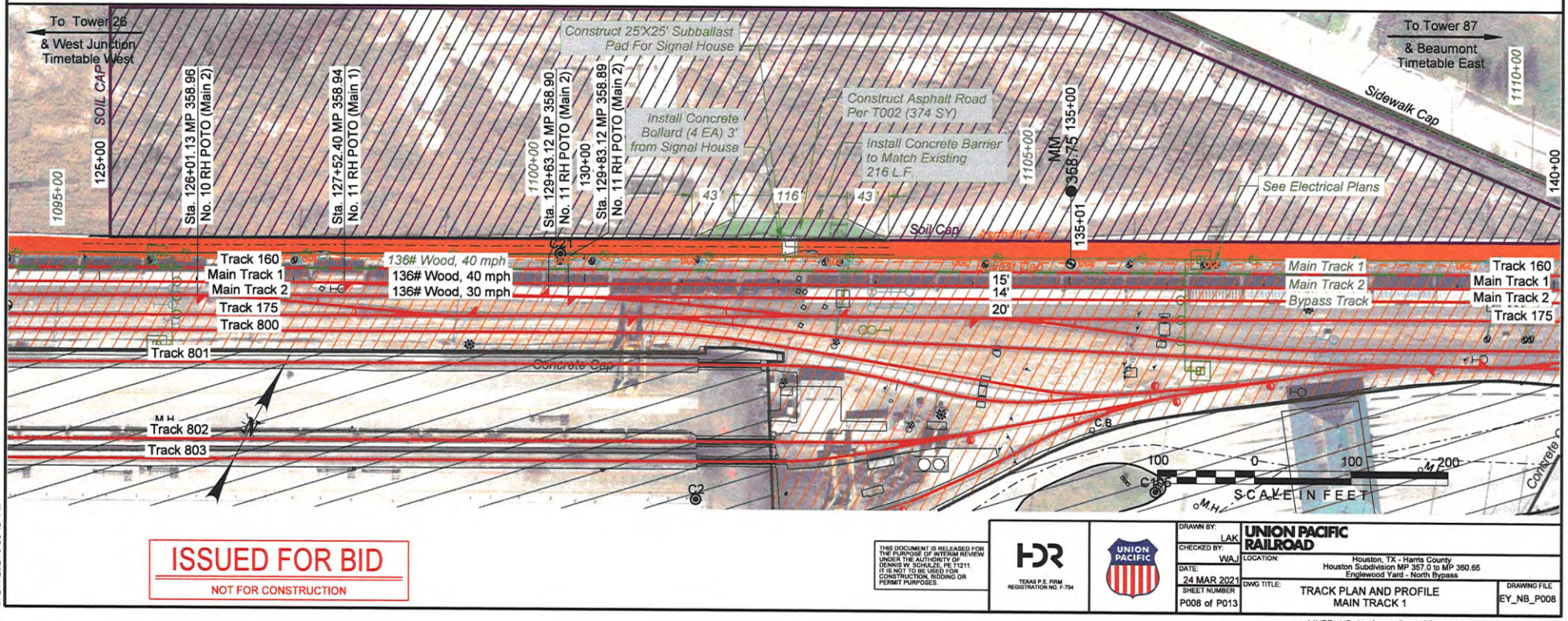

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HDR
TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	WAJ
DATE:	24 MAR 2021
SHEET NUMBER	P008 of P013

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: TRACK PLAN AND PROFILE
MAIN TRACK 1

DRAWING FILE: EY_NB_P008

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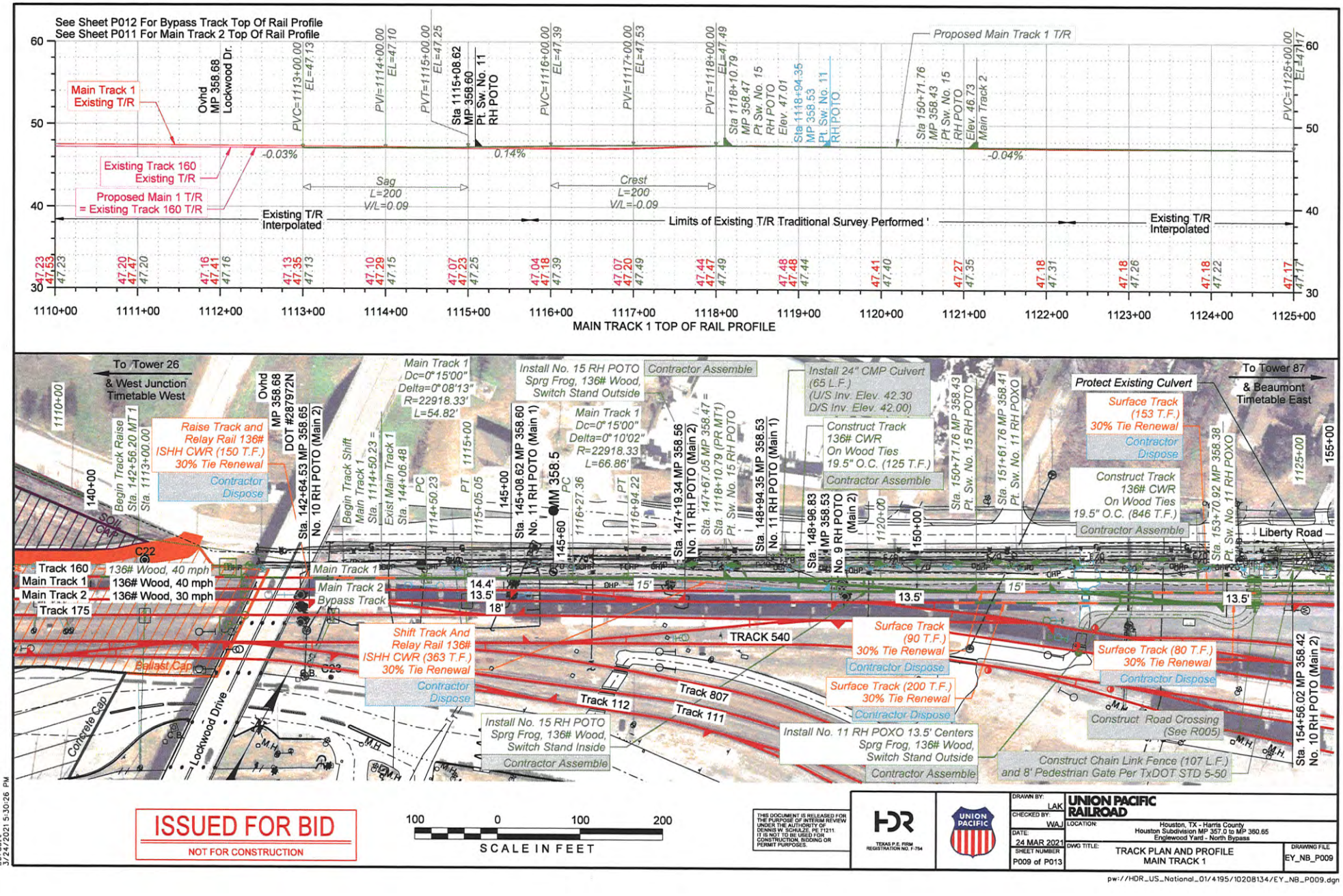
See Sheet P012 For Bypass Track Top Of Rail Profile
See Sheet P011 For Main Track 2 Top Of Rail Profile
Main Track 1 Existing T/R
Existing Track 160 Existing T/R
Proposed Main 1 T/R = Existing Track 160 T/R
Ovhd MP 358.68 Lockwood Dr.
PVC=1113+00.00 EL=47.13
PVI=1114+00.00 EL=47.10
PVT=1115+00.00 EL=47.25
Sta 1115+08.62 MP 358.60 Pt. Sw. No. 11 RH POTO
PVC=1116+00.00 EL=47.39
PVI=1117+00.00 EL=47.53
PVT=1118+00.00 EL=47.49
Sta 1118+10.79 MP 358.47 Pt Sw. No. 15 RH POTO Elev. 47.01
Sta 1118+94.35 MP 358.53 Pt. Sw. No. 11 RH POTO
Proposed Main Track 1 T/R
Sta 150+71.76 MP 358.43 Pt Sw. No. 15 RH POTO Elev. 46.73 Main Track 2
PVC=1125+00.00 EL=47.17
-0.03%
0.14%
-0.04%
Sag L=200 V/L=0.09
Crest L=200 V/L=-0.09
Existing T/R Interpolated
Limits of Existing T/R Traditional Survey Performed '
Existing T/R Interpolated
MAIN TRACK 1 TOP OF RAIL PROFILE
To Tower 26 & West Junction Timetable West
To Tower 87 & Beaumont Timetable East
Begin Track Raise Sta. 142+56.20 MT1 Sta. 1113+00.00
Raise Track and Relay Rail 136# ISHH CWR (150 T.F.) 30% Tie Renewal
Contractor Dispose
Ovhd MP 358.68 DOT #287972N
Sta. 142+64.53 MP 358.65 No. 10 RH POTO (Main 2)
Begin Track Shift Main Track 1 Sta. 1114+50.23 = Exist Main Track 1 Sta. 144+06.48 PC
Main Track 1 Dc=0°15'00" Delta=0°08'13" R=22918.33' L=54.82'
PT 1115+05.05
Sta. 145+08.62 MP 358.60 No. 11 RH POTO (Main 1)
MM 358.5
Main Track 1 Dc=0°15'00" Delta=0°10'02" R=22918.33 L=66.86'
PC 1116+27.36
PT 1116+94.22
Sta. 147+19.34 MP 358.56 No. 11 RH POTO (Main 2)
Sta. 147+67.05 MP 358.47 = Sta. 1118+10.79 (PR MT1) Pt. Sw. No. 15 RH POTO
Sta. 148+94.35 MP 358.53 No. 11 RH POTO (Main 1)
Sta. 148+96.83 MP 358.53 No. 9 RH POTO (Main 2)
Install No. 15 RH POTO Sprg Frog, 136# Wood, Switch Stand Outside
Contractor Assemble
Install 24" CMP Culvert (65 L.F.) (U/S Inv. Elev. 42.30 D/S Inv. Elev. 42.00)
Construct Track 136# CWR On Wood Ties 19.5" O.C. (125 T.F.)
Sta. 150+71.76 MP 358.43 Pt. Sw. No. 15 RH POTO
Sta. 151+61.76 MP 358.41 Pt. Sw. No. 11 RH POXO
Protect Existing Culvert
Surface Track (153 T.F.) 30% Tie Renewal
Construct Track 136# CWR On Wood Ties 19.5" O.C. (846 T.F.)
Sta. 153+70.92 MP 358.38 Pt. Sw. No. 11 RH POXO
Liberty Road
Track 160 136# Wood, 40 mph
Main Track 1 136# Wood, 40 mph
Main Track 2 136# Wood, 30 mph
Track 175
Main Track 1
Main Track 2 Bypass Track
14.4'
13.5'
18'
15'
13.5'
Shift Track And Relay Rail 136# ISHH CWR (363 T.F.) 30% Tie Renewal
Contractor Dispose
Ballast Cap
Concrete Cap
Lockwood Drive
TRACK 540
Track 112
Track 807
Track 111
Surface Track (90 T.F.) 30% Tie Renewal
Surface Track (200 T.F.) 30% Tie Renewal
Surface Track (80 T.F.) 30% Tie Renewal
Install No. 15 RH POTO Sprg Frog, 136# Wood, Switch Stand Inside
Install No. 11 RH POXO 13.5' Centers Sprg Frog, 136# Wood, Switch Stand Outside
Construct Road Crossing (See R005)
Construct Chain Link Fence (107 L.F.) and 8' Pedestrian Gate Per TxDOT STD 5-50
Sta. 154+56.02 MP 358.42 No. 10 RH POTO (Main 2)
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100 0 100 200
SCALE IN FEET
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TEXAS P.E. FIRM REGISTRATION NO. F-754
DRAWN BY: LAK
CHECKED BY: WAJ
DATE: 24 MAR 2021
SHEET NUMBER P009 of P013
UNION PACIFIC RAILROAD
LOCATION: Houston, TX - Harris County Houston Subdivision MP 357.0 to MP 360.65 Englewood Yard - North Bypass
DWG TITLE: TRACK PLAN AND PROFILE MAIN TRACK 1
DRAWING FILE EY_NB_P009
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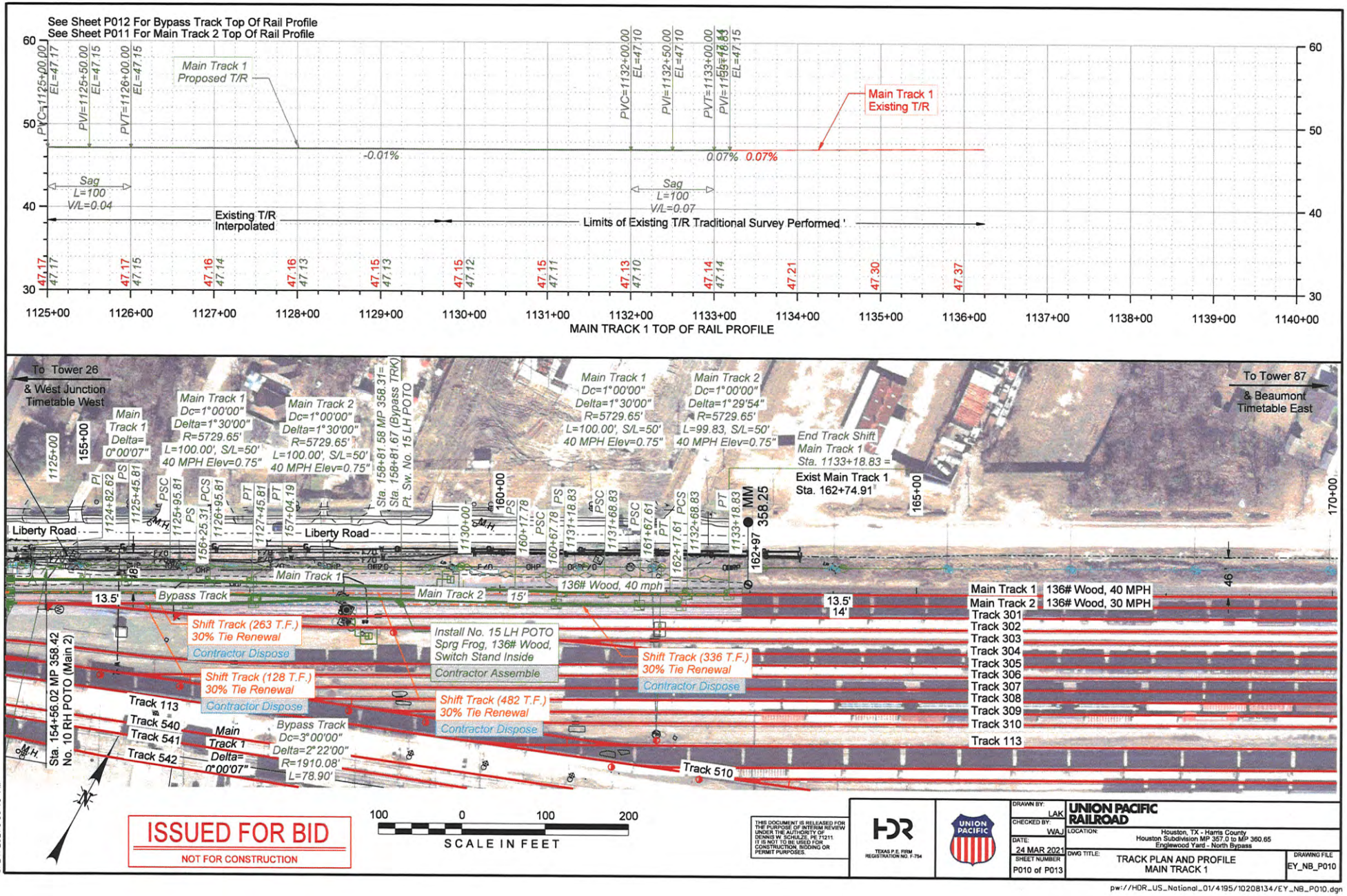
See Sheet P012 For Bypass Track Top Of Rail Profile
See Sheet P011 For Main Track 2 Top Of Rail Profile
Main Track 1 Proposed T/R
Main Track 1 Existing T/R
PVC=1125+00.00 EL=47.17
PVI=1125+50.00 EL=47.15
PVT=1126+00.00 EL=47.15
PVC=1132+00.00 EL=47.10
PVI=1132+50.00 EL=47.10
PVT=1133+00.00 EL=47.15
-0.01%
0.07% 0.07%
Sag L=100 V/L=0.04
Sag L=100 V/L=0.07
Existing T/R Interpolated
Limits of Existing T/R Traditional Survey Performed
MAIN TRACK 1 TOP OF RAIL PROFILE
To Tower 26 & West Junction Timetable West
To Tower 87 & Beaumont Timetable East
Main Track 1 Dc=1°00'00" Delta=1°30'00" R=5729.65' L=100.00', S/L=50' 40 MPH Elev=0.75"
Main Track 2 Dc=1°00'00" Delta=1°30'00" R=5729.65' L=100.00', S/L=50' 40 MPH Elev=0.75"
Main Track 1 Dc=1°00'00" Delta=1°30'00" R=5729.65' L=100.00', S/L=50' 40 MPH Elev=0.75"
Main Track 2 Dc=1°00'00" Delta=1°29'54" R=5729.65' L=99.83, S/L=50' 40 MPH Elev=0.75"
End Track Shift Main Track 1 Sta. 1133+18.83 =
Exist Main Track 1 Sta. 162+74.91
Sta. 158+81.58 MP 358.31= Pt. Sw. No. 15 LH POTO
Sta. 158+81.67 (Bypass TRK)
MM 358.25
Liberty Road
Main Track 1
Main Track 2
Bypass Track
136# Wood, 40 mph
Shift Track (263 T.F.) 30% Tie Renewal
Contractor Dispose
Shift Track (128 T.F.) 30% Tie Renewal
Contractor Dispose
Install No. 15 LH POTO Sprg Frog, 136# Wood, Switch Stand Inside
Contractor Assemble
Shift Track (482 T.F.) 30% Tie Renewal
Contractor Dispose
Shift Track (336 T.F.) 30% Tie Renewal
Contractor Dispose
Sta. 154+56.02 MP 358.42 No. 10 RH POTO (Main 2)
Track 113
Track 540
Track 541
Track 542
Bypass Track Dc=3°00'00" Delta=2°22'00" R=1910.08' L=78.90'
Track 510
Main Track 1 136# Wood, 40 MPH
Main Track 2 136# Wood, 30 MPH
Track 301
Track 302
Track 303
Track 304
Track 305
Track 306
Track 307
Track 308
Track 309
Track 310
Track 113
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TEXAS P.E. FIRM REGISTRATION NO. F-754
UNION PACIFIC RAILROAD
DRAWN BY: LAK
CHECKED BY: WAJ
DATE: 24 MAR 2021
SHEET NUMBER P010 of P013
LOCATION: Houston, TX - Harris County Houston Subdivision MP 357.0 to MP 360.65 Englewood Yard - North Bypass
DWG TITLE: TRACK PLAN AND PROFILE MAIN TRACK 1
DRAWING FILE EY_NB_P010
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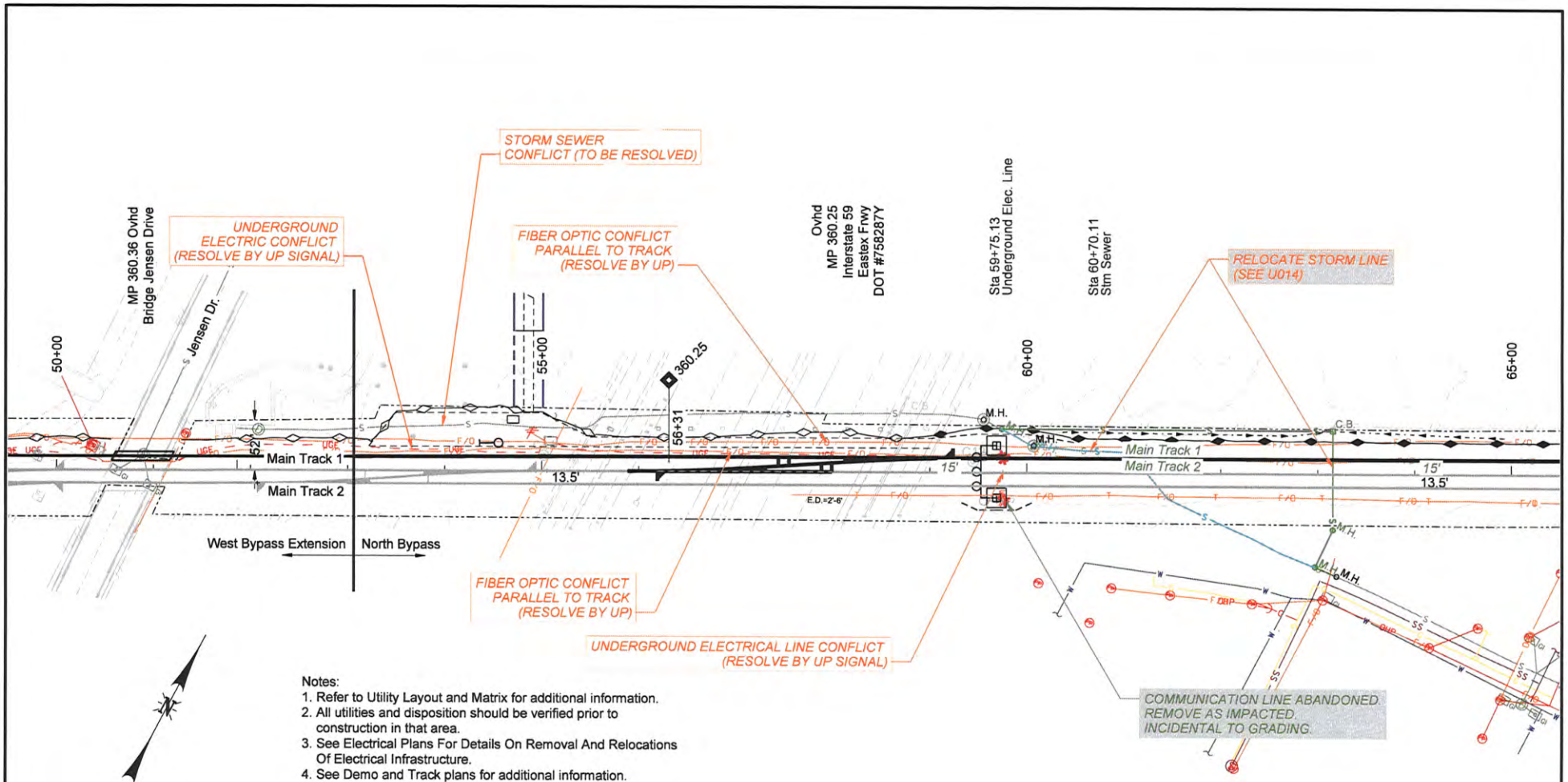

Notes:
1. Refer to Utility Layout and Matrix for additional information.
2. All utilities and disposition should be verified prior to construction in that area.
3. See Electrical Plans For Details On Removal And Relocations Of Electrical Infrastructure.
4. See Demo and Track plans for additional information.

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	JNS
DATE:	24 MAR 2021
SHEET NUMBER	U003 of U014

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: UTILITY PLAN

DRAWING FILE: EY_NB_U003

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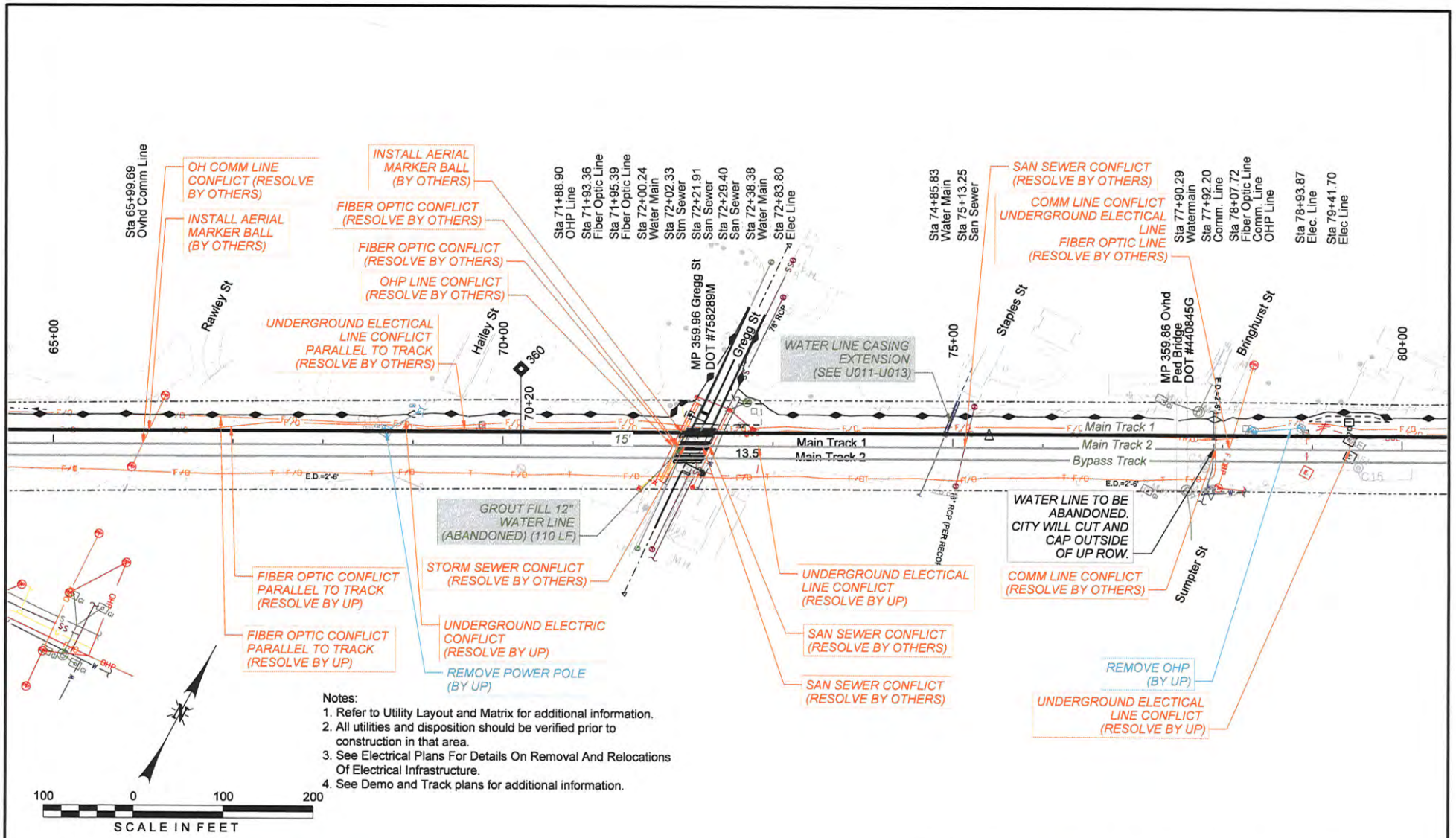

Notes:
1. Refer to Utility Layout and Matrix for additional information.
2. All utilities and disposition should be verified prior to construction in that area.
3. See Electrical Plans For Details On Removal And Relocations Of Electrical Infrastructure.
4. See Demo and Track plans for additional information.

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HDR — TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY: LAK	UNION PACIFIC RAILROAD
CHECKED BY: JNS	LOCATION: Houston, TX - Harris County; Houston Subdivision MP 357.0 to MP 360.65; Englewood Yard - North Bypass
DATE: 24 MAR 2021	DWG TITLE: UTILITY PLAN
SHEET NUMBER: U004 of U014	DRAWING FILE: EY_NB_U004

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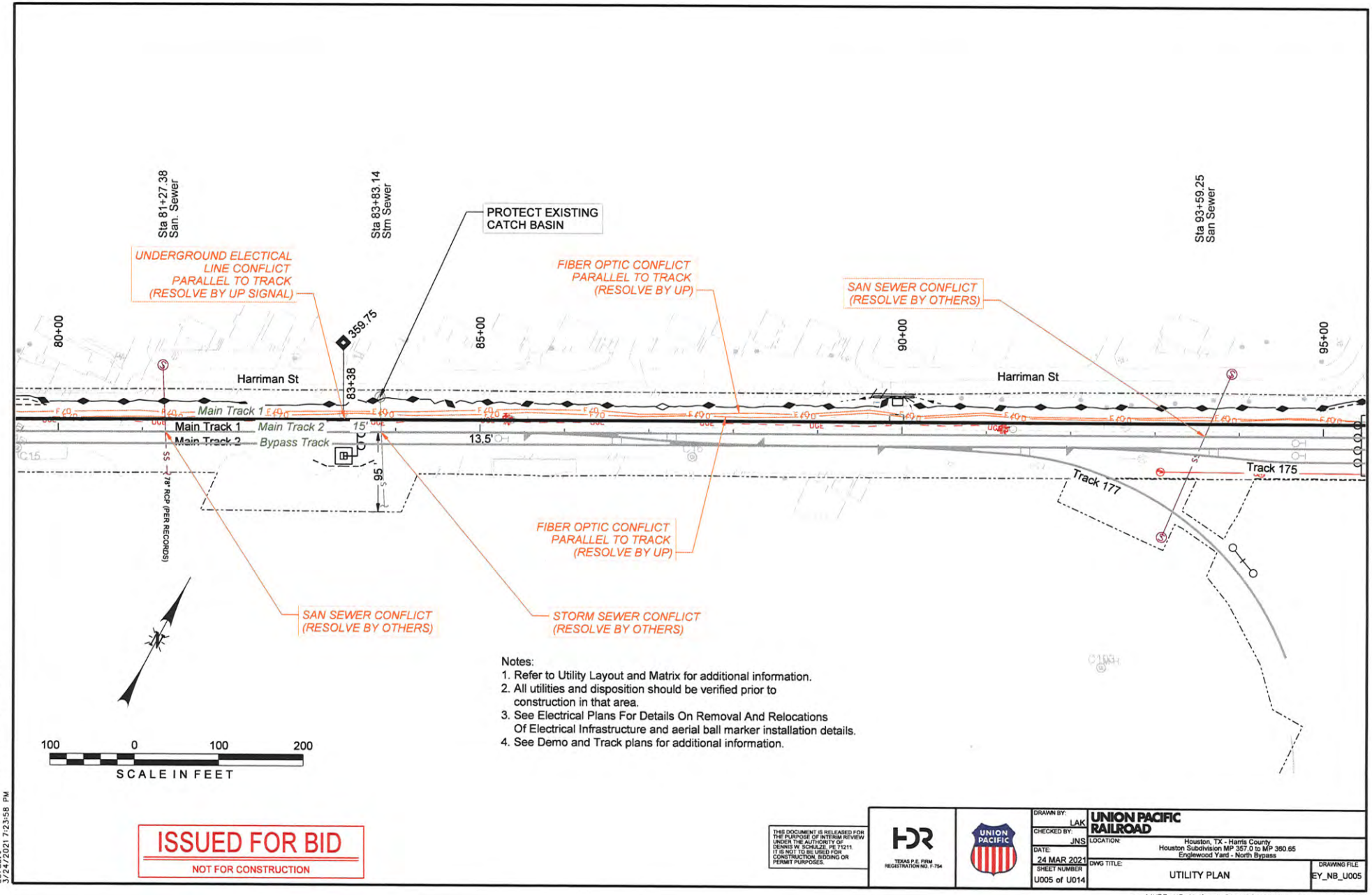

Notes:
1. Refer to Utility Layout and Matrix for additional information.
2. All utilities and disposition should be verified prior to construction in that area.
3. See Electrical Plans For Details On Removal And Relocations Of Electrical Infrastructure and aerial ball marker installation details.
4. See Demo and Track plans for additional information.

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	JNS
DATE:	24 MAR 2021
SHEET NUMBER	U005 of U014

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: UTILITY PLAN

DRAWING FILE: EY_NB_U005

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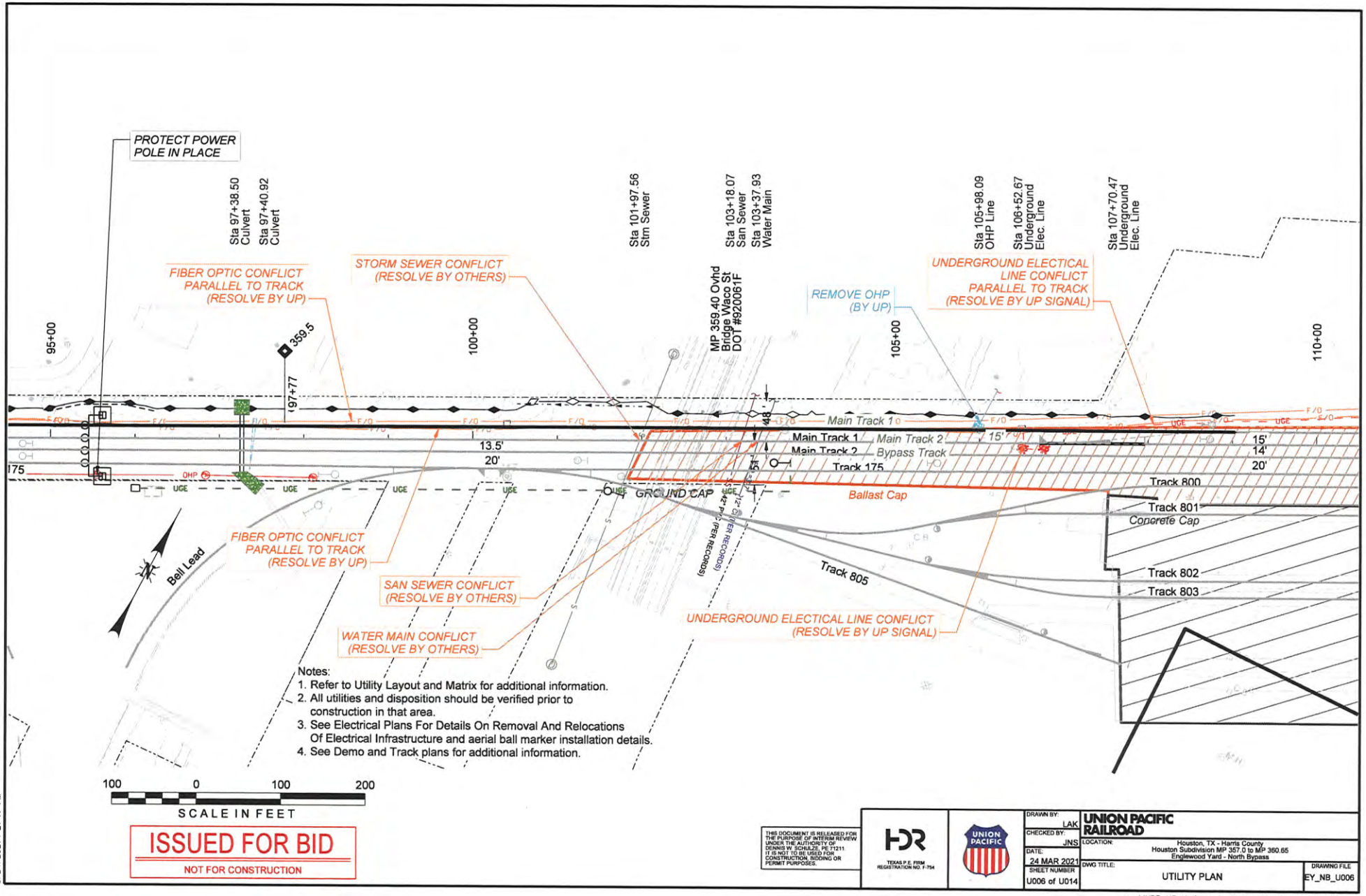

Notes:
1. Refer to Utility Layout and Matrix for additional information.
2. All utilities and disposition should be verified prior to construction in that area.
3. See Electrical Plans For Details On Removal And Relocations Of Electrical Infrastructure and aerial ball marker installation details.
4. See Demo and Track plans for additional information.

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HDR — TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	JNS
DATE:	24 MAR 2021
SHEET NUMBER	U006 of U014

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: UTILITY PLAN

DRAWING FILE: EY_NB_U006

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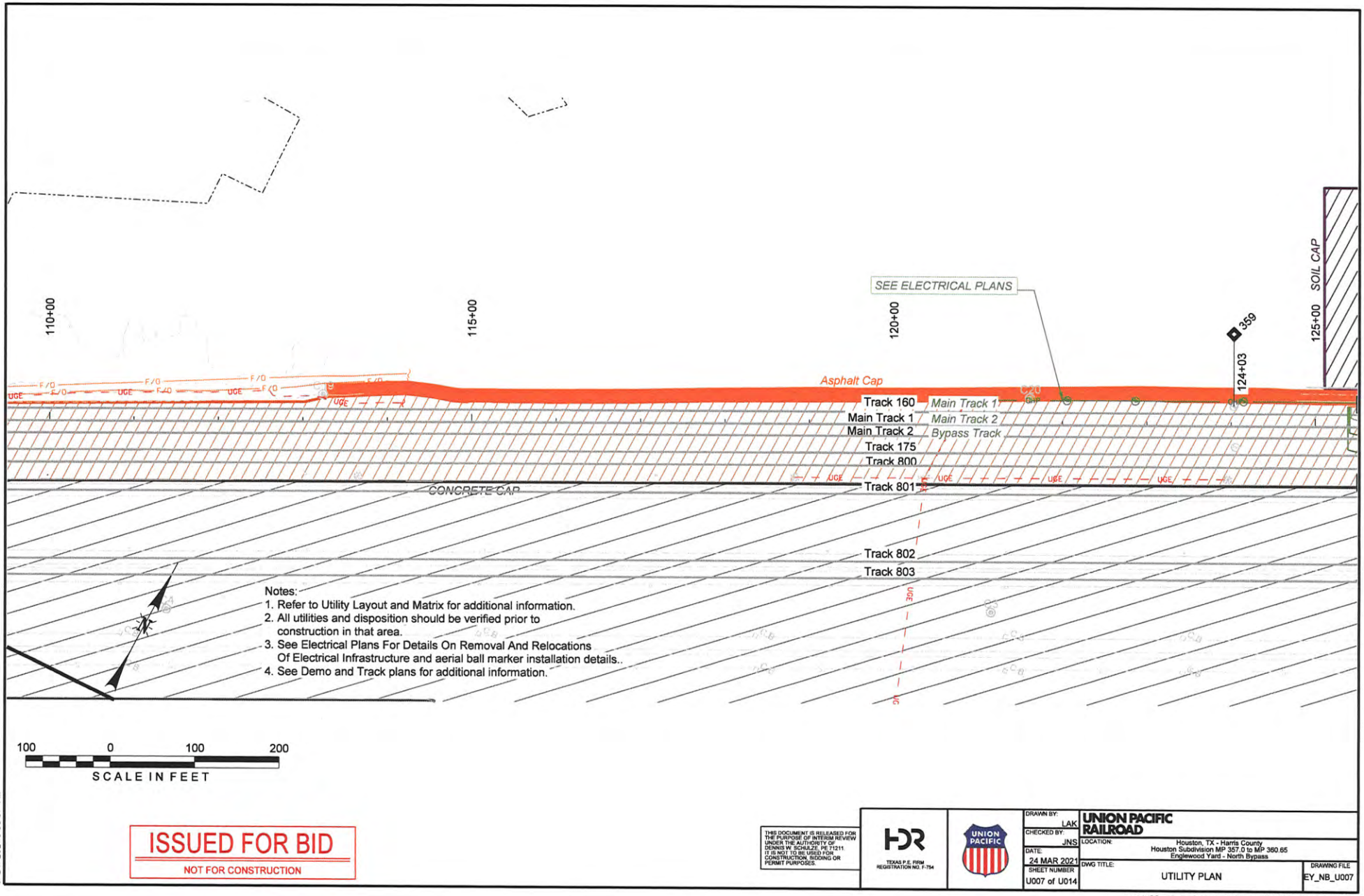

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HDR TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	JNS
DATE:	24 MAR 2021
SHEET NUMBER	U007 of U014

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: UTILITY PLAN

DRAWING FILE: EY_NB_U007

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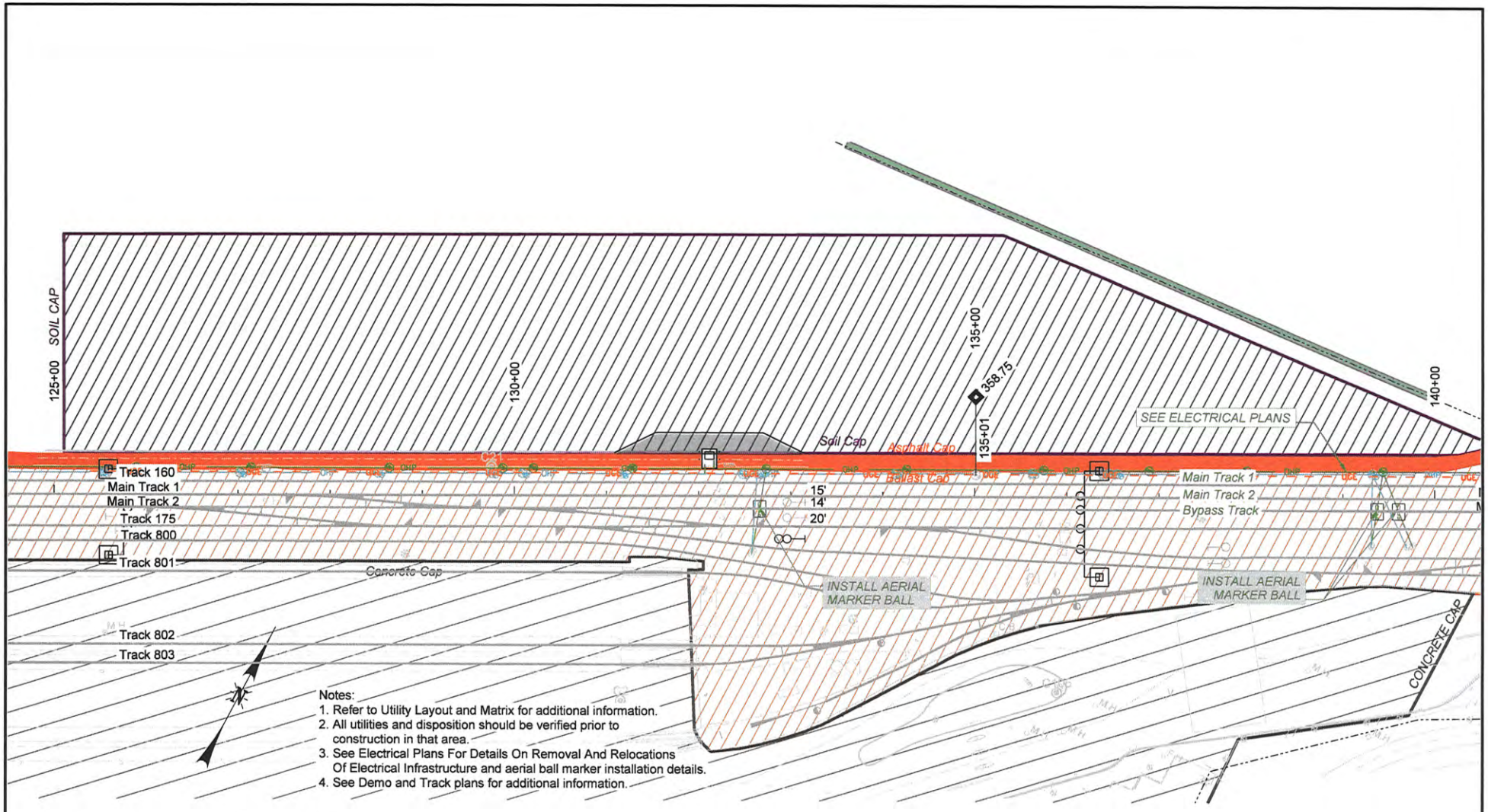
125+00
SOIL CAP
130+00
135+00
358.75'
135+01
140+00
SEE ELECTRICAL PLANS
Soil Cap
Asphalt Cap
Ballast Cap
Track 160
Main Track 1
Main Track 2
Track 175
Track 800
Track 801
Track 802
Track 803
Concrete Cap
15'
14'
20'
Main Track 1
Main Track 2
Bypass Track
INSTALL AERIAL MARKER BALL
INSTALL AERIAL MARKER BALL
CONCRETE CAP
Notes:
1. Refer to Utility Layout and Matrix for additional information.
2. All utilities and disposition should be verified prior to construction in that area.
3. See Electrical Plans For Details On Removal And Relocations Of Electrical Infrastructure and aerial ball marker installation details.
4. See Demo and Track plans for additional information.
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TEXAS P.E. FIRM REGISTRATION NO. F-754
DRAWN BY: LAK
CHECKED BY: JNS
DATE: 24 MAR 2021
SHEET NUMBER: U008 of U014
UNION PACIFIC RAILROAD
LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass
DWG TITLE: UTILITY PLAN
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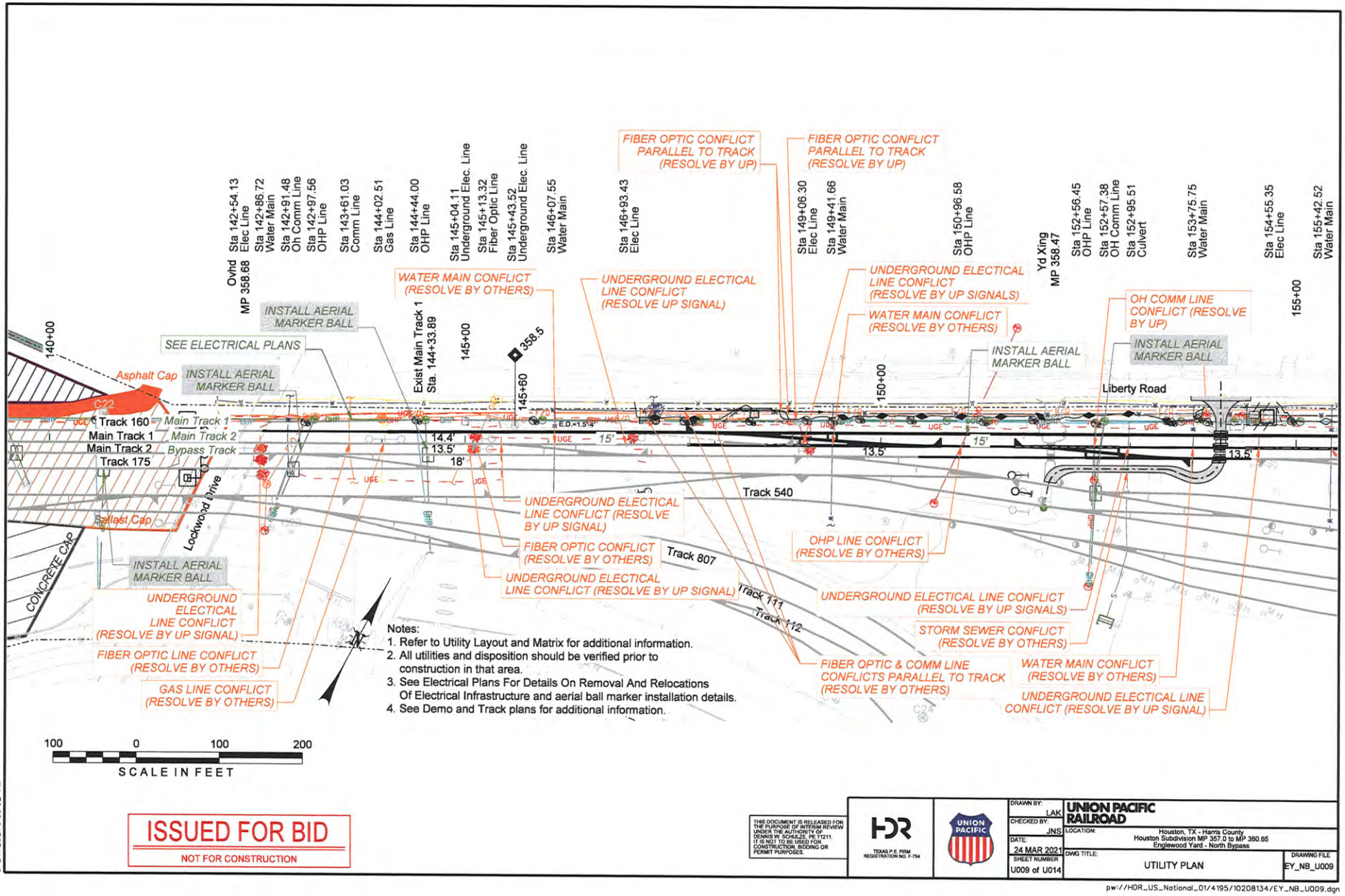

Notes:
1. Refer to Utility Layout and Matrix for additional information.
2. All utilities and disposition should be verified prior to construction in that area.
3. See Electrical Plans For Details On Removal And Relocations Of Electrical Infrastructure and aerial ball marker installation details.
4. See Demo and Track plans for additional information.

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HDR — TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	JNS
DATE:	24 MAR 2021
SHEET NUMBER	U009 of U014

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: UTILITY PLAN

DRAWING FILE: EY_NB_U009

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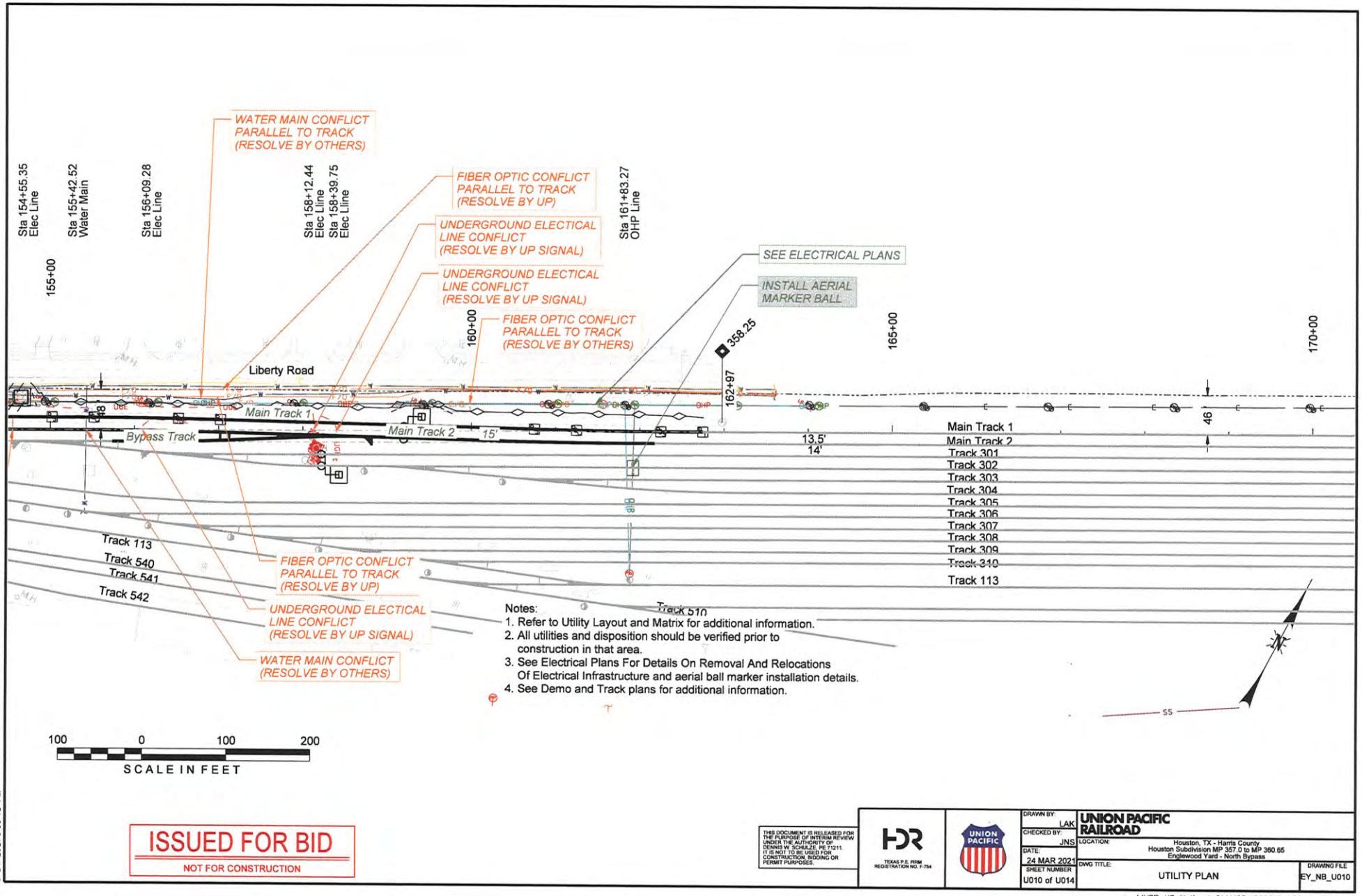
WATER MAIN CONFLICT PARALLEL TO TRACK (RESOLVE BY OTHERS)
FIBER OPTIC CONFLICT PARALLEL TO TRACK (RESOLVE BY UP)
UNDERGROUND ELECTICAL LINE CONFLICT (RESOLVE BY UP SIGNAL)
UNDERGROUND ELECTICAL LINE CONFLICT (RESOLVE BY UP SIGNAL)
FIBER OPTIC CONFLICT PARALLEL TO TRACK (RESOLVE BY OTHERS)
SEE ELECTRICAL PLANS
INSTALL AERIAL MARKER BALL
Sta 154+55.35 Elec Line
Sta 155+42.52 Water Main
Sta 156+09.28 Elec Line
Sta 158+12.44 Elec Line
Sta 158+39.75 Elec Line
Sta 161+83.27 OHP Line
155+00
160+00
162+97
358.25
165+00
170+00
Liberty Road
Main Track 1
Main Track 2
Bypass Track
15'
13.5'
14'
46'
Track 113
Track 540
Track 541
Track 542
Track 510
Main Track 1
Main Track 2
Track 301
Track 302
Track 303
Track 304
Track 305
Track 306
Track 307
Track 308
Track 309
Track 310
Track 113
FIBER OPTIC CONFLICT PARALLEL TO TRACK (RESOLVE BY UP)
UNDERGROUND ELECTICAL LINE CONFLICT (RESOLVE BY UP SIGNAL)
WATER MAIN CONFLICT (RESOLVE BY OTHERS)
Notes:
1. Refer to Utility Layout and Matrix for additional information.
2. All utilities and disposition should be verified prior to construction in that area.
3. See Electrical Plans For Details On Removal And Relocations Of Electrical Infrastructure and aerial ball marker installation details.
4. See Demo and Track plans for additional information.
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SCALE IN FEET
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HDR
TEXAS P.E. FIRM REGISTRATION NO. F-754
UNION PACIFIC
DRAWN BY: LAK
CHECKED BY: JNS
DATE: 24 MAR 2021
SHEET NUMBER: U010 of U014
UNION PACIFIC RAILROAD
LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass
DWG TITLE: UTILITY PLAN
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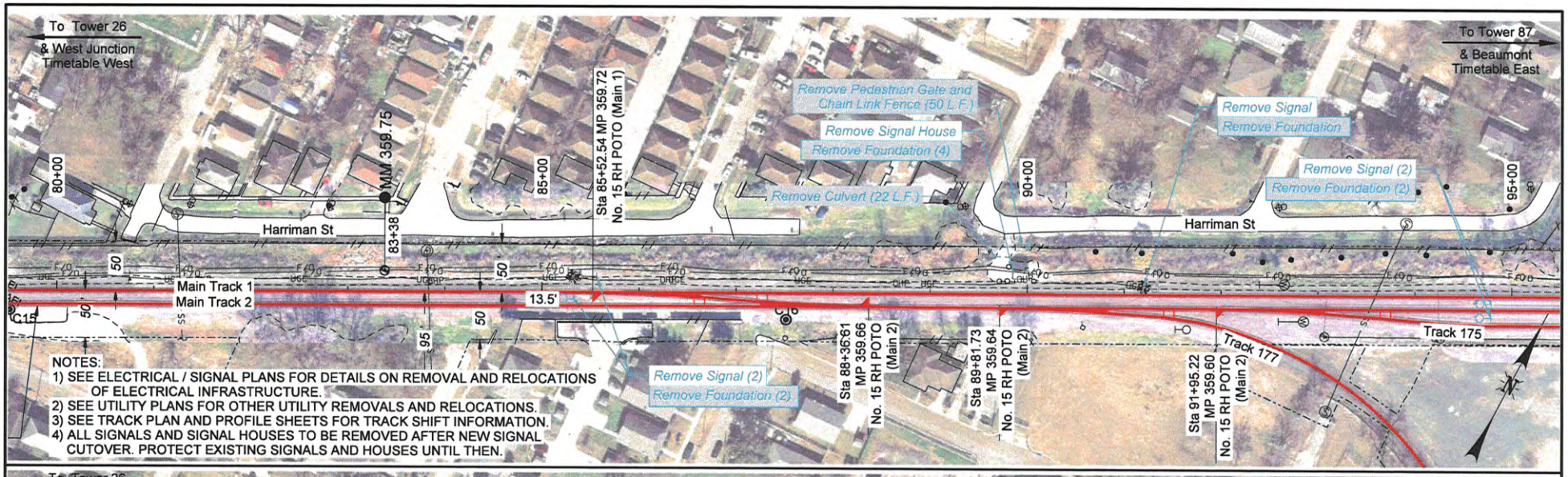

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TEXAS P.E. FIRM REGISTRATION NO. F-754

UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	WAJ
DATE:	24 MAR 2021
SHEET NUMBER	XD03 of XD05

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: DEMO PLANS

DRAWING FILE: EY_NB_XD03

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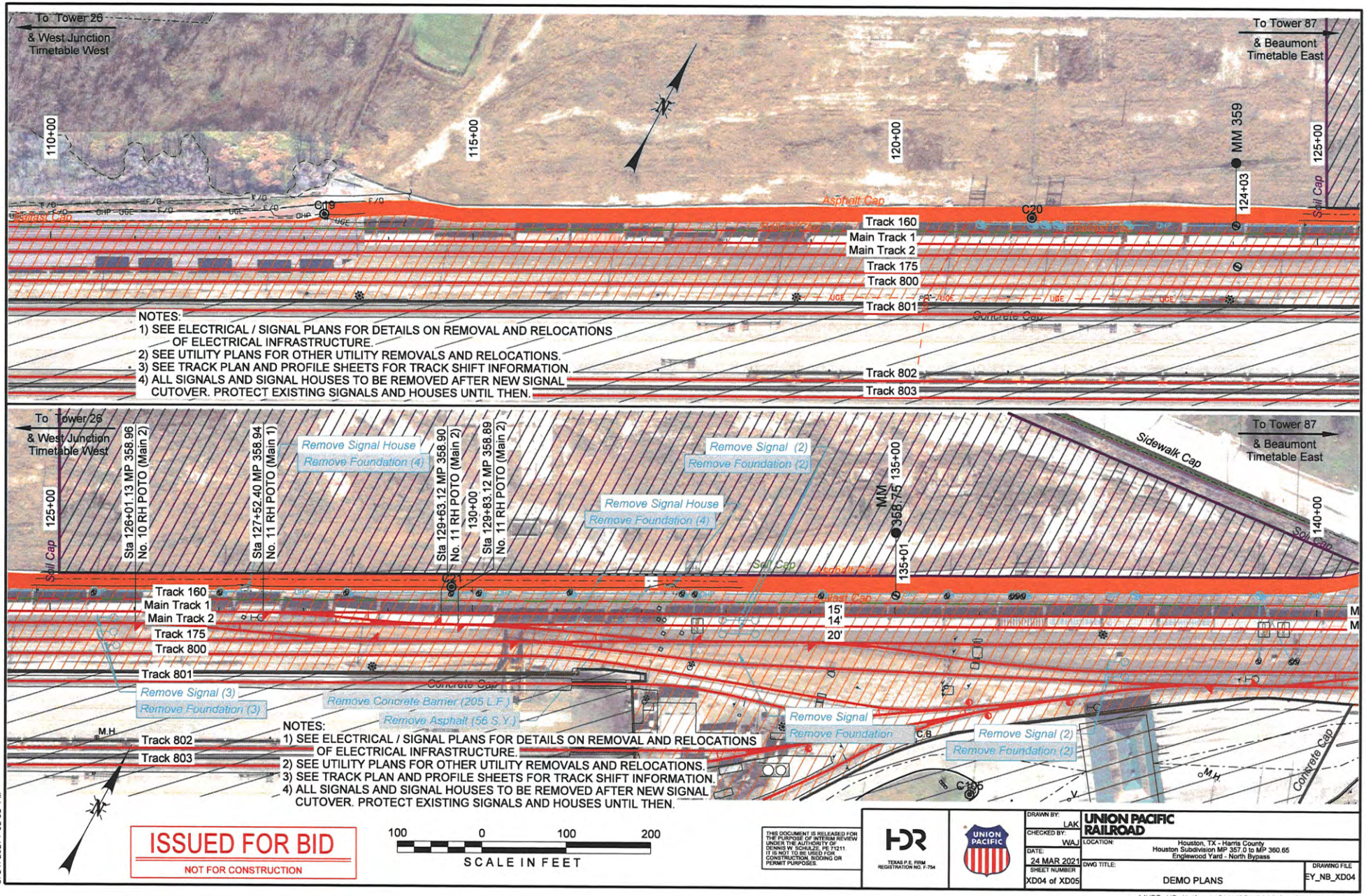

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UNION PACIFIC

DRAWN BY:	LAK
CHECKED BY:	WAJ
DATE:	24 MAR 2021
SHEET NUMBER	XD04 of XD05

UNION PACIFIC RAILROAD

LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass

DWG TITLE: DEMO PLANS

DRAWING FILE: EY_NB_XD04

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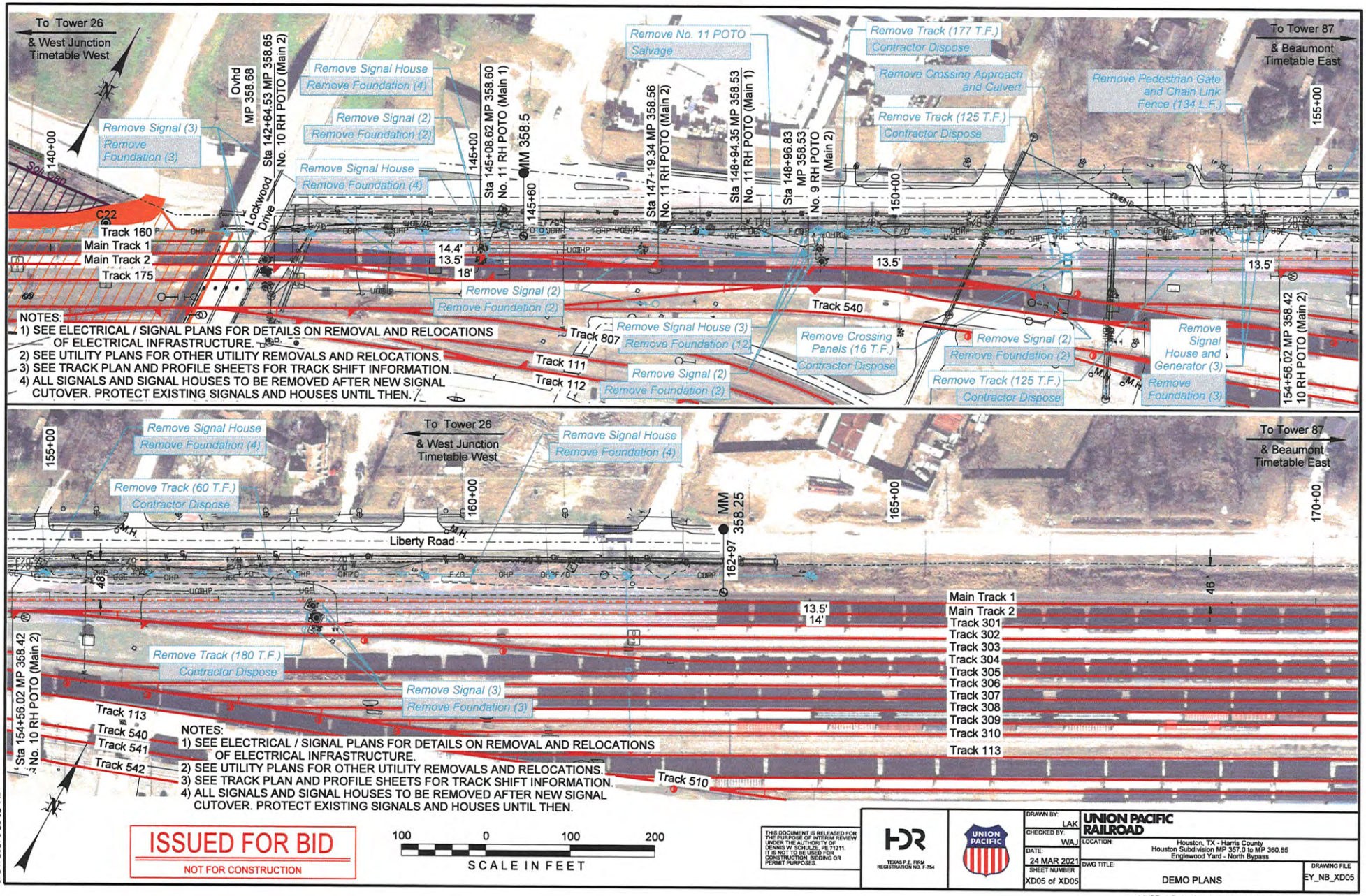
To Tower 26
& West Junction
Timetable West
To Tower 87
& Beaumont
Timetable East
Ovhd
MP 358.68
Sta 142+64.53 MP 358.65
No. 10 RH POTO (Main 2)
Sta 145+08.62 MP 358.60
No. 11 RH POTO (Main 1)
MM 358.5
Sta 147+19.34 MP 358.56
No. 11 RH POTO (Main 2)
Sta 148+94.35 MP 358.53
No. 11 RH POTO (Main 1)
Sta 148+96.83
MP 358.53
No. 9 RH POTO
(Main 2)
Lockwood Drive
Soil Pad
C22
Track 160
Main Track 1
Main Track 2
Track 175
Track 807
Track 111
Track 112
Track 540
Remove Signal House
Remove Foundation (4)
Remove Signal (3)
Remove Foundation (3)
Remove Signal (2)
Remove Foundation (2)
Remove Signal House (3)
Remove Foundation (12)
Remove No. 11 POTO
Salvage
Remove Crossing
Panels (16 T.F.)
Contractor Dispose
Remove Track (177 T.F.)
Contractor Dispose
Remove Crossing Approach
and Culvert
Remove Track (125 T.F.)
Contractor Dispose
Remove Pedestrian Gate
and Chain Link
Fence (134 L.F.)
Remove Signal
House and
Generator (3)
Remove
Foundation (3)
14.4'
13.5'
18'
13.5'
13.5'
140+00
145+00
145+60
150+00
155+00
154+56.02 MP 358.42
10 RH POTO (Main 2)
NOTES:
1) SEE ELECTRICAL / SIGNAL PLANS FOR DETAILS ON REMOVAL AND RELOCATIONS OF ELECTRICAL INFRASTRUCTURE.
2) SEE UTILITY PLANS FOR OTHER UTILITY REMOVALS AND RELOCATIONS.
3) SEE TRACK PLAN AND PROFILE SHEETS FOR TRACK SHIFT INFORMATION.
4) ALL SIGNALS AND SIGNAL HOUSES TO BE REMOVED AFTER NEW SIGNAL CUTOVER. PROTECT EXISTING SIGNALS AND HOUSES UNTIL THEN.
To Tower 26
& West Junction
Timetable West
To Tower 87
& Beaumont
Timetable East
Remove Signal House
Remove Foundation (4)
Remove Track (60 T.F.)
Contractor Dispose
Remove Track (180 T.F.)
Contractor Dispose
Remove Signal (3)
Remove Foundation (3)
Liberty Road
M.H.
MM
358.25
162+97
155+00
160+00
165+00
170+00
46'
13.5'
14'
Main Track 1
Main Track 2
Track 301
Track 302
Track 303
Track 304
Track 305
Track 306
Track 307
Track 308
Track 309
Track 310
Track 113
Track 510
Track 113
Track 540
Track 541
Track 542
Sta 154+56.02 MP 358.42
No. 10 RH POTO (Main 2)
NOTES:
1) SEE ELECTRICAL / SIGNAL PLANS FOR DETAILS ON REMOVAL AND RELOCATIONS OF ELECTRICAL INFRASTRUCTURE.
2) SEE UTILITY PLANS FOR OTHER UTILITY REMOVALS AND RELOCATIONS.
3) SEE TRACK PLAN AND PROFILE SHEETS FOR TRACK SHIFT INFORMATION.
4) ALL SIGNALS AND SIGNAL HOUSES TO BE REMOVED AFTER NEW SIGNAL CUTOVER. PROTECT EXISTING SIGNALS AND HOUSES UNTIL THEN.
ISSUED FOR BID
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HDR
TEXAS P.E. FIRM REGISTRATION NO. F-754
UNION PACIFIC
DRAWN BY: LAK
CHECKED BY: WAJ
DATE: 24 MAR 2021
SHEET NUMBER: XD05 of XD05
UNION PACIFIC RAILROAD
LOCATION: Houston, TX - Harris County
Houston Subdivision MP 357.0 to MP 360.65
Englewood Yard - North Bypass
DWG TITLE: DEMO PLANS
DRAWING FILE: EY_NB_XD05
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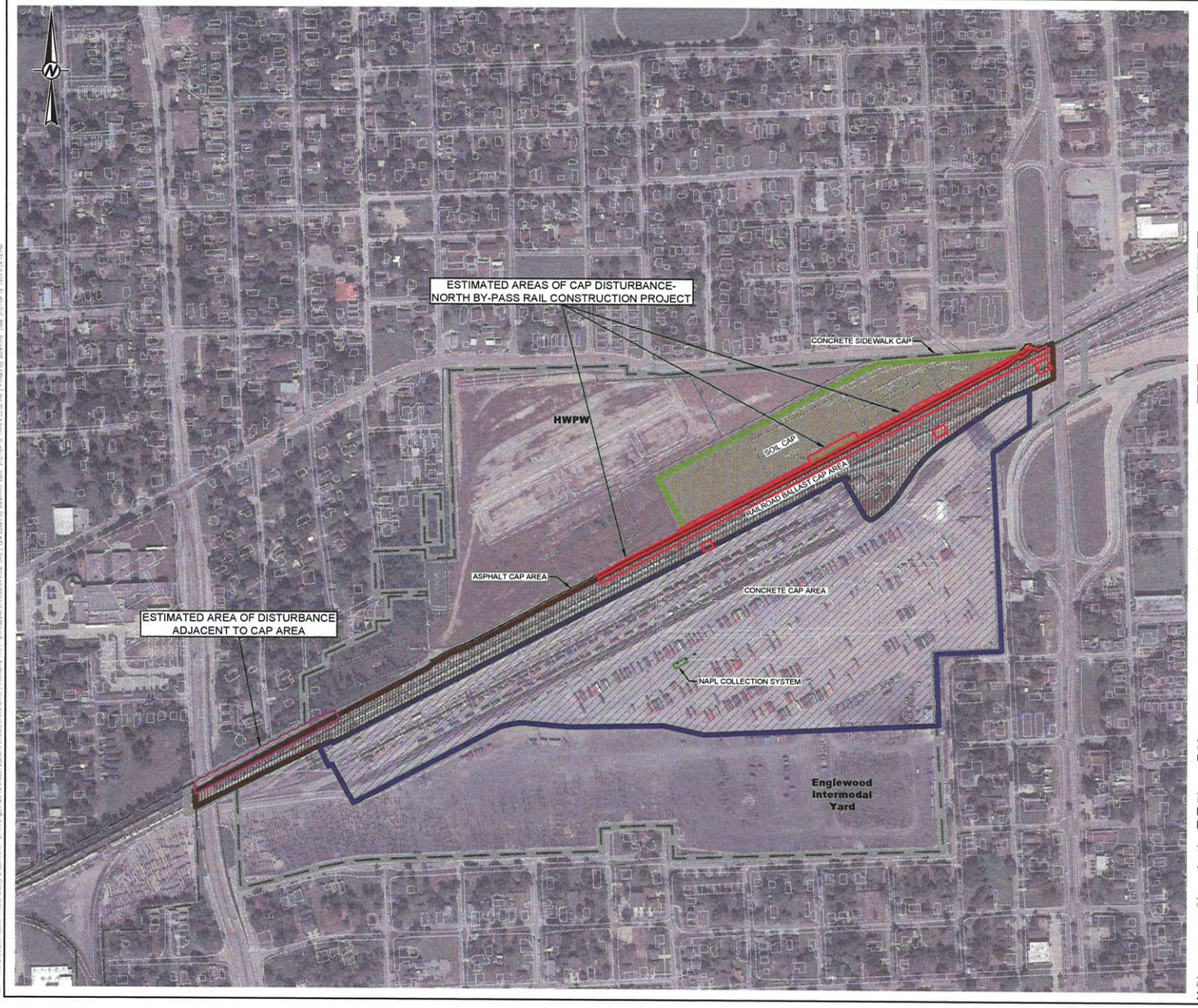


LEGEND

- UPRR PROPERTY BOUNDARY
- ROAD, PARKING LOT, SIDEWALK
- FENCE
- RAILROAD
- HISTORIC STRUCTURE AND FEATURE
- RAILROAD BALLAST CAP AREA
- ASPHALT CAP AREA
- SOIL CAP
- CONCRETE CAP AREA
- NAPL COLLECTION SYSTEM SUMP
- EXISTING NAPL COLLECTION SYSTEM (CONSTRUCTED FEB. 2019)
- ESTIMATED AREA OF CAP DISTURBANCE
- ESTIMATED AREA OF DISTURBANCE ADJACENT TO CAP AREA

NOTE(S)

1. THE CAP DISTURBANCE AREAS IDENTIFIED ON THIS FIGURE ARE PRELIMINARY AND WILL BE REFINED DURING THE DESIGN OF THE UPRR ENGINEERING NORTH BY-PASS RAIL PROJECT.

REFERENCE(S)

BASE MAP FROM ERM-SOUTHEAST, INC APAR ADDENDUM, FIG 3-1, DATED JUNE 2004.

0 200 400
1" = 400' FEET

CLIENT
UNION PACIFIC RAILROAD CO.

PROJECT
ENGLEWOOD NORTH BY-PASS
HOUSTON, TEXAS

TITLE
APPROXIMATE AREAS OF DISTURBANCE TO CAPS

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-04-15
DESIGNED	AJD
PREPARED	AJD
REVIEWED	ECM
APPROVED	ECM

PROJECT NO. 20144747 REV. 0 FIGURE 1

Effluent Limitation Guidelines (ELG) have been established under the renewed March 2018 TPDES General Permit. Please see Section G., page 40 of TXR15000 contained herein behind Tab 9.

EROSION AND SEDIMENTATION CONTROLS

Erosion control and stabilization practices may include but are not limited to, the establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.
Major erosion and sedimentation controls are indicated on the SWPPP Site Plan, located in the previous section, Section 3 Maps and Plans.

Short and Long-Term Goals and Criteria:

- Sediment will be retained on site to the extent practicable with consideration for local topography, soil type, and rainfall.
- Control measures will be properly selected, installed, and maintained in accordance with manufacturers' specifications and good engineering practices.
- If periodic inspections or other information indicates that a control is being used incorrectly, or that the control is performing inadequately, it will be replaced or modified immediately upon discovery.
- If sediment escapes the site, off-site accumulations will be removed at a frequency to minimize negative impacts and whenever feasible, prior to the next rain event.
- Sediment will be removed from sediment traps or sedimentation ponds when design capacity has been reduced by 50%.
- Litter, construction debris, and construction chemicals exposed to Stormwater will be removed, covered or otherwise prevented from becoming a pollutant source.
- Offsite materials storage areas, if used (also including overburden and stockpiles of dirt, borrow areas, etc.), are considered a part of the project and will be addressed in the SWPPP.

STABILIZATION PRACTICES

Short and Long-Term Goals and Criteria:

- Erosion Control and Stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Stabilization measures that provide a protective cover must be initiated immediately in portions of the site where construction activities have permanently ceased. The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next workday, following the day when the earth-disturbing activities have temporarily or permanently ceased
    - Erosion control and stabilization practices may include but are not limited to, establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.
- Except as provided below, these measures must be completed as soon practicable, but no more than 14 calendar days after the initial of soil stabilization measures:
    - Where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased due to frozen conditions, non-vegetative controls must be implemented until thawing conditions are present, and vegetative stabilization measures can be initiated as soon as practicable.
    - In arid areas, semi-arid areas, or drought-stricken areas, as they are defined in Part I.B of this general permit, where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased or is precluded by arid conditions, other types of erosion control and stabilization measures must be initiated at the site as soon as practicable. Where vegetative controls are infeasible due to arid conditions, and within 14 calendar days of a temporary or permanent cessation of construction activity in any portion of the site, the operator shall immediately install non-vegetative erosion controls in areas of the

construction site where construction activity is complete or has ceased. If non-vegetative controls are infeasible, the operator shall install temporary sediment controls

- In areas where non-vegetative controls are infeasible, the operator may alternatively utilize temporary perimeter controls. The operator must document in the SWPPP the reason why stabilization measures are not feasible; and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable. The operator must continue to inspect the BMPs at the frequency established for unstabilized sites.
- The requirement for permittees to initiate stabilization is triggered as soon as it is known with reasonable certainty that construction activity at the site or in certain areas of the site will be stopped for 14 or more additional calendar days. If the initiation or completion of vegetative stabilization is prevented by circumstances beyond the control of the permittee, the permittee must employ and implement alternative stabilization measures immediately. When conditions at the site changes that would allow for vegetative stabilization, then the permittee must initiate or complete vegetative stabilization as soon as practicable.
- TCEQ does not expect that temporary or permanent stabilization measures to be applied to areas that are intended to be left un-vegetated or un-stabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).

Interim and Permanent Stabilization Practices for this Site include:

- Stabilized construction exits will be constructed of 3x5 crushed concrete to minimize, to the extent practicable, the offsite tracking of sediment and generation of dust unless existing pavement is available.
- Any staging or parking areas will also be stabilized to minimize to the extent practicable, the offsite tracking of sediment and generation of dust.
- Newly graded areas will have textured soil surfaces to reduce sheet flow and improve surface water impoundment.
- Filter Fabric Fence will be used to protect perimeters and temporary earth stockpiles while they are in use.
- Vegetative stabilization will be initiated on all disturbed soil at the completion of construction.

STRUCTURAL PRACTICES

These practices will be utilized to divert flows away from exposed soils, to limit contact of runoff with disturbed areas, or to lessen the off-site transport of eroded soils.

- Filter Fabric Fence will be erected at the perimeter of the area to be disturbed, as needed to prevent the escape of silt and sediment from the construction activity.
- Inlet Protection Barriers will be placed in existing storm drain inlets as needed to prevent silt and sediment from entering the storm sewer system.
- Inlet Protection Barriers will also be placed in new storm drain inlets as they are installed.
- Rock Filter Dams will be installed along the east perimeter of the site to prevent silt and sediment from entering the storm sewer system.

Any additional controls which are implemented in response to changing conditions during construction are to be noted below:

- _____
- _____
- _____
- _____
- _____
- _____
- _____

Sequence of Major Erosion and Sediment Control Activities

Phase 1
The Filter Fabric Fence will be installed at the site boundaries where needed to prevent the escape of silt and sediment, prior to any disturbance of the soil on this site. Inlet Protection Barriers will be placed in existing storm drain inlets as needed. Existing landscape drains and odd-sized/landscape grates will be wrapped with non-woven geo-textile fabric.

Phase 2
Inlet Protection Barriers will be placed in new storm drain inlets as they are installed. Odd-sized/landscape grates will be wrapped with non-woven geo-textile fabric.

Phase 3
When construction activity is substantially complete, temporary structural controls will then be removed and all disturbed soils will be stabilized with plant material.

SEDIMENTATION CONTROL PRACTICES

Sedimentation Basins

A sedimentation basin is deemed not feasible on this site, for a variety of reasons, including site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. Equivalent measures, as described above, will be implemented.

PERMANENT STORMWATER MANAGEMENT

Measures shall be performed as required to ensure establishment of soil cover where evidence of erosion occurs.

Stormwater will discharge from the site via existing drainage swales and culverts to the Hunting Bayou and ultimately to Buffalo Bayou.

This Operator is responsible only for the installation and maintenance of the described stormwater management measures prior to final stabilization of the site or prior to submission of an NOT.

STORMWATER MANAGEMENT – HWPW CAPPED AREAS

The project area includes a portion of the UPRR Houston Wood Preserving Works (HWPW) affected property (SWR# 31547 and TCEQ Hazardous Waste Permit No. 50343). The HWPW site had been historically used for wood preserving operations. The primary chemicals of concern are related to creosote. Soil within the HWPW capped areas is considered to contain listed hazardous waste (F034) and will be classified as hazardous waste once generated unless otherwise demonstrated with TCEQ approval. The HWPW capped areas are depicted on attached Figure 1.

The planned construction activities will likely encounter soils previously impacted from the historical operations (e.g., wood preserving operations). Contractor shall schedule work activities within the HWPW capped areas to minimize the time that open excavated areas are potentially exposed to precipitation. BMP's shall be installed along the perimeter of open excavated areas in the HWPW capped areas to divert stormwater runoff from adjacent areas away from the excavation. Stormwater run-on and run-off control measures, such as construction of temporary berms (a minimum of 12 inches high) and covering of stockpiles using plastic sheeting (6 mil thick), will be implemented as needed. In the event any stormwater does accumulate in excavated areas within the HWPW property through direct precipitation, runoff from adjacent areas or any other source, the Contractor will immediately contact the UPRR Environmental Site Remediation Manager. Any stormwater that comes into contact with exposed soils in open excavated areas in the capped areas shall be containerized and shall not be discharged. UPRR Environmental will coordinate the sampling, profiling, and disposal of the stormwater in accordance with state and federal laws. The waste characterization profile analysis of containerized stormwater will include:

- Volatile Organic Compounds (VOCs) by SW846 Method 8260,

- Semi-Volatile Organic Compounds (semi-VOCs) by SW846 Method 8270,
- Total Petroleum Hydrocarbons (TPH) by Texas Method 1005,
- RCRA metals by SW846 Method 6000/7000 series including Toxicity Characteristic Leaching Procedure (TCLP), and
- pH by EPA Method 9040.

The Contractor will be responsible to ensure no releases of stormwater from the excavations within the HWPW capped areas.

OTHER CONTROLS

Waste Disposal

- Waste Materials
  Minimize the exposure of waste materials by closing lids at the end of the workday. For waste containers that do not have lids, where the container itself is not sufficiently secure enough to prevent the discharge of pollutants absent a cover and cold leak, the permittee must provide either a cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment)

  All waste materials will be collected and stored in a metal dumpster provided by: _____: The dumpster will meet all local and state solid waste management regulations. All trash and construction debris from the site will be deposited in the dumpster. The trash and debris will be hauled to an approved landfill. No construction waste material will be buried or burned onsite. Maintenance work on vehicles/equipment will not be allowed onsite except for emergency repair. All construction personnel will be instructed regarding the correct procedure for waste disposal. The Project Superintendent, who manages the day-to-day site operations, will be responsible for seeing that these procedures are followed.

- Hazardous Waste
  No hazardous waste is expected to be generated or encountered in this project except within the capped areas of the Houston Wood Preserving Works (HWPW) site described in the "Stormwater Management – HWPW Capped Areas" section. In the event that hazardous waste is encountered, all hazardous waste materials will be disposed of in the manner specified by local or state regulation or by the manufacturer. The Project Superintendent, who manages day-to-day site operations, will be responsible for seeing that these practices are followed.

- Sanitary Waste
  Sanitary portable units will be provided for use by construction personnel. Sanitary waste will be collected and disposed of offsite. A licensed sanitary waste management contractor: _____: will regularly collect all sanitary waste from the portable units.

- Compliance with State, Tribal and Local Disposal Regulations
  Methods for collecting, hauling and disposing of spoil, waste material, sanitary and hazardous wastes will be in compliance with applicable federal, state, and local regulations.

Offsite Vehicle Tracking

A stabilized construction entrance will be provided at necessary locations to minimize offsite tracking of sediments and generation of dust, to the extent practicable. In the event that tracking occurs, the paved public roadways affected by work operations will be cleaned as necessary to remove any excess mud, dirt or other matter tracked from the site.

Dewatering

Should site dewatering be required, all Stormwater runoff that requires dewatering shall be filtered to reduce sediment transport.

When pumping (dewatering) standing Stormwater from the site, the operator shall use appropriate Best Management Practices (BMPs) from the Stormwater Management Handbook for Construction Activities that address dewatering activities. Untreated/Direct discharge into a storm sewer will not be allowed.

Concrete Truck Wash Out
Concrete washouts are used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solids for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drainpipes and cause flooding.

Direct discharge of concrete truck wash out water to surface waters or storm drain conveyances is prohibited. Wash out water will be discharged only to structural controls which have been designed specifically for this purpose. Wash out during rain events should be avoided.

Concrete Sawcutting Waste Management (SWM)
This management practice is to prevent by-products of sawcutting from entering the storm sewer system and polluting receiving waters.

Establish ahead of time appropriately designated areas to dispose of sawcutting waste. Sawcutting waste should not be allowed to drain to any Stormwater conveyance system or to remain on the pavement to dry out.

An appropriate disposal area is one protected by one or more sediment removal Best Management Practices (BMP's) which prevents the slurry and cuttings from contaminating surface or ground waters. While cutting, continuously vacuuming waste will help prevent contaminated water from leaving the site.

Pressure Washing
If pressure washing is done at the site, all run-off will be captured and treated as necessary (per guidelines detailed in the TPDES General Permit, TXR150000).

Dust Control
The transport of air-borne dust and sediment from this site will be controlled as needed, to the extent practicable, by appropriate methods which may include periodic watering or use of approved chemical stabilizers.

Pollutant Sources from Support Activities and Controls
No discharges of Stormwater from associated construction activities, including concrete batch plants, asphalt batch plants, equipment staging areas, and material storage yards, material borrow areas and excavated material disposal areas will take place under this SWPPP. All work will be conducted at the project site. If any support activities occur off site, this SWPPP will be amended to describe them and any additional control measures that may be needed beyond those described herein.

Measures to Protect Certain Species, or Critical Habitat
There are no special measures required to protect threatened or endangered species/critical habitat on this site.

Measures to Protect Historical Sites
There are no historical sites known to exist at this site. However, if any historical sites are discovered, this information will be revised to reflect appropriate coordination.

APPROVED STATE, LOCAL OR TRIBAL PLANS

This plan meets the stormwater management and erosion and sediment control measure requirements of the City of Houston, and the TPDES General Permit TXR150000, under which it was developed.

A Total Maximum Daily Limit (TMDL) for Bacteria has been imposed on Houston Ship Channel/Buffalo Bayou Tidal, Hunting Bayou Above Tidal, Unnamed Tributary of Hunting Bayou; however, there are no limitations, conditions, or special requirements applicable to discharges from construction sites which have been established at the time this Plan was developed. If any such requirements are established prior to termination of coverage for this site under the Texas General Permit, they will be addressed through amendment(s) to this document.

In general terms, new sources or new discharges of the pollutants of concern to impaired waters are not authorized by this permit unless otherwise allowable under 30 TAC Chapter 305 and applicable state law. Impaired waters are those that do not meet

applicable water quality standard(s) and are listed as category 4 or 5 in the current version of the Texas Integrated Report of Surface Water Quality, and waterbodies listed on the CWA § 303(d) list. Pollutants of concern are those for which the water body is listed as impaired.

Discharges of the pollutants of concern to impaired water bodies for which there is a TMDL are not eligible for coverage under this general permit unless they are consistent with the approved TMDL. Permittees must incorporate the conditions and requirements applicable to their discharges into their SWP3, in order to be eligible for coverage under this general permit. For consistency with the construction stormwater-related items in an approved TMDL, the SWP3 must be consistent with any applicable condition, goal, or requirement in the TMDL, TMDL Implementation Plan (I-Plan), or as otherwise directed by the executive director.

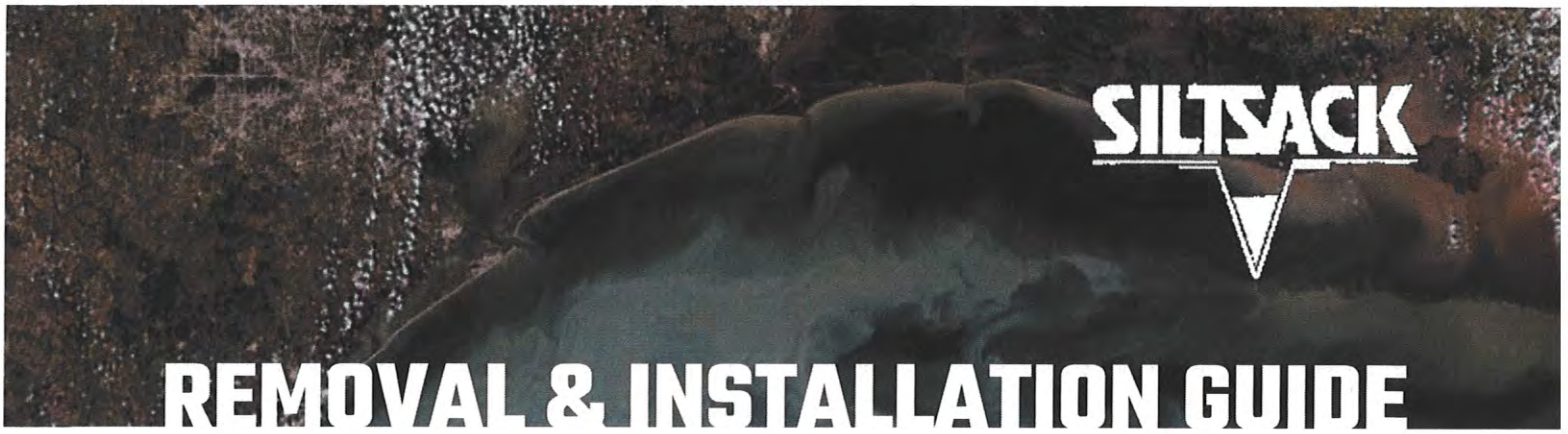
This SWPPP will be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by state or local officials from whom the permittee receives written notice.

No tribal land is known to occur at the site. However, if tribal land is found to occur at the site, then the information will be revised to reflect appropriate coordination.

MAINTAINENCE

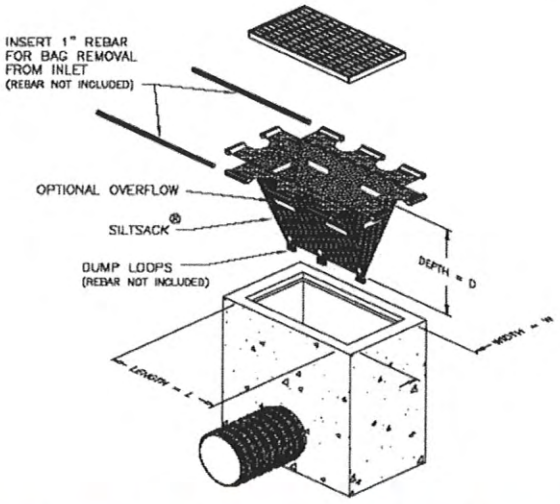
All erosion and sedimentation control measures and practices identified in this SWPPP are to be maintained in effective operating condition as follows:

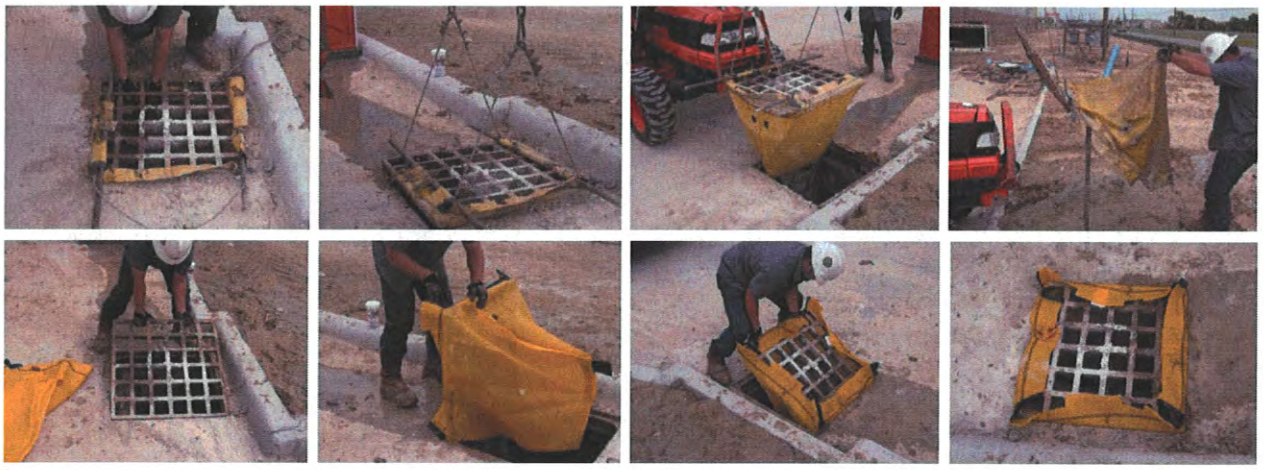
- Erosion and sediment control measures that have been improperly installed or have been disabled, run over, removed, or otherwise rendered ineffective will be replaced or corrected immediately upon discovery.
    - If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the control will be replaced or modified as practicable after making the discovery.
- Maintenance and repairs identified as necessary in an inspection (see Section 6 Site Inspections below) will be conducted before the next anticipated storm event, if feasible.
- If maintenance prior to the next anticipated storm event is impracticable, the reason will be documented in the SWPPP and maintenance will be scheduled and accomplished as soon as practicable.
- Sediment will be removed from the sediment fences and inlet protection barriers before it reaches 50% of the above ground height of the barrier.
- If sediment escapes the site, accumulations will be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee will work with the owner or operator of the property to remove the sediment.



REMOVAL & INSTALLATION GUIDE

The Siltsack is a highly effective Inlet Protection Barrier for grated inlets. Installed below the grate and out of the way, Siltsacks provide a large surface area through which to filter incoming flow, and are equipped with overflow holes that prevent extended ponding following rain events. These heavy duty IPBs are ideal for both Stage 1 and Stage 2 applications, eliminating the need for the traditional two-solution approach. Constructed from high-strength polypropylene geotextile fabric, Siltsacks are durable and stand up to cleaning and reuse.





INSTRUCTIONS

Slide 1" rebar through lifting straps (notched loops in hem of Siltsack) on opposite sides of the grate. Lift Siltsack with forklift by sliding forks under the rebar and through the notches in the lifting straps, or by wrapping chain around the rebar and lifting with a front end loader.

Take Siltsack to appropriate dumping area and place on ground. Remove rebar and insert one rebar through the dump loops sewn into the bottom of the unit. Lift Siltsack by rebar to empty. Beat Siltsack, as you would a rug, to clean sediment from fabric, or wash down with water hose.

Once the Siltsack is clean, you can begin installation of new Silt sack. Remove the grate and wrap the Siltsack around the grate on all four sides. Be sure the rebar straps are above the grate for easy clean out. Use tie wire to secure the Siltsack to the grate on all four sides.

Installation of Siltsack can be performed by one man in less than five minutes, eliminating heavy equipment costs. Once the Siltsack is attached to the grate, place the grate back into the catch basin.

STORMWATER MANAGEMENT DONE RIGHT
The Right Solutions. The Right Way. The Right Reasons.

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SCOPE OF INSPECTIONS

- Disturbed areas of the construction site which have not been finally stabilized;
- Areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system;
- Erosion and sediment control measures identified in the plan will be observed for evidence of, or the potential for, pollutant entering the drainage system---and to ensure that they are operating correctly;
- Locations where vehicles enter or exit the site will be inspected for evidence of offsite sediment tracking; and,
- Where discharge locations or points are accessible, they will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

SCHEDULE OF INSPECTIONS

- Inspections will be conducted by the responsible person at least once every 7 calendar days.
- In the event of flooding or other uncontrollable situations which prohibit access to the site, inspections will be conducted as soon as access is practicable.
- The above detailed schedule may be changed a maximum of one time each month but must be implemented at the beginning of a calendar month, and the reason to the schedule change must be documented in this SWPPP.

SWPPP MODIFICATIONS AS A RESULT OF INSPECTIONS

Based on the results of each inspection, Section 2 Site Description and Section 4 Controls elsewhere in this SWPPP will be revised as appropriate, but in no case later than 7 calendar days following the inspection. If modifications to BMPs are necessary, they will be implemented whenever possible before the next storm event, or if that is impracticable, the changes will be implemented as soon as practicable. Major modifications to this SWPPP will be logged in Section 11 SWPPP Amendments Log as they are made.
In addition to indication changing BMP needs and locations on the SWPPP Site Map, current locations of the following shall also be noted when applicable:

- Portable toilets
- Material storage areas
- Vehicle and equipment fueling and maintenance areas
- Concrete Washouts
- Paint and stucco washouts
- Dumpsters or other trash and debris containers
- Spill Kits
- Stockpiles
- Any temporarily removed structural BMPs

INSPECTION REPORT FORMAT

A report summarizing the scope of the inspection, name of personnel making the inspection, the date of the inspection, major observations relating to the implementation of the SWPPP, and actions taken in accordance the schedule noted above will be made and retained as part of this SWPPP for at least three years from the date that the site is finally stabilized. The reports will be signed in accordance with the TPDES General Permit. The completed Inspection Reports related to this SWPPP are found in Section 12 Inspection Records.

A sample of the Inspection Report Form to be used in conjunction with this SWPPP is included immediately behind this page. Qualifications of the site inspector(s) may be found in Section 10 Certifications and Documents, elsewhere in this SWPPP, as well as the formal delegation of inspection responsibility by the Operator, to this individual/entity.

SWPPP INSPECTION REPORT

7 DAY CYCLE

PROJECT NAME:	DATE OF INSPECTION:	INSPECTOR NAME:

PHASE: (I) (II)

CONSTRUCTION PHASE (MAJOR GRADING AND/OR STABILIZATION ACTIVITIES): DEMO ☐ CLEARING ☐ ROUGH GRADE ☐ UTILITY INSTALL ☐ PAD PREP ☐ SLAB/PAVING PREP ☐ CONCRETE PLACEMENT ☐ FINAL GRADING ☐ LANDSCAPING ☐ FINAL STABILIZATION ☐

SWPPP SIGNAGE: IN PLACE & PROPERLY LOCATED? (Y) (N)
SWPPP POSTINGS: ACCURATE, LEGIBLE & UP TO DATE? (Y) (N)

SWPPP BOOK: ONSITE & ACCESSIBLE? (Y) (N)
SWPPP NARRATIVE: COMPLETE & UP TO DATE? (Y) (N)

SWPPP INSPECTOR QUALIFICATIONS: DOCUMENTED IN THE SWPPP? (Y) (N)

BMP OBSERVATIONS AND COMMENTS

DOCUMENT, INITIAL, & DATE IN FAR RIGHT COLUMN WHEN ISSUES ARE CORRECTED →

				INITIAL & DATE CORRECTIONS HERE
SCE	**STABILIZED CONSTRUCTION EXIT**			
DOES ALL TRAFFIC USE THE SCE?	(Y) (N)			
DOES SCE NEED REHABILITATION?	(Y) (N)			
DOES SEDIMENT NEED TO BE CLEANED FROM STREET?	(Y) (N)			
SF	**SILT FENCE**	**(N/A)**		
DOES SF NEED REPAIR OR RESET IN ANY AREA?	(Y) (N)			
IS SEDIMENT REMOVAL NEEDED IN ANY AREA?	(Y) (N)			
ANY EVIDENCE OF OVER-TOPPING OR WASHING-OUT?	(Y) (N)			
IPB	**INLET PROTECTION BARRIERS**	**(N/A)**		
ARE IPBs IN PLACE & FUNCTIONING PROPERLY?	(Y) (N)			
DO ANY IPBs NEED TO BE CLEANED & RESET?	(Y) (N)			
DO ANY IPBs NEED TO BE REPLACED?	(Y) (N)			
CW	**CONCRETE WASHOUT**	**(N/A)**		
IS CW IN PLACE, LOCATED & FUNCTIONING PROPERLY?	(Y) (N)			
DO SOLIDS AND/OR LIQUIDS NEED TO BE REMOVED?	(Y) (N)			
OTHER	**CONTROLS AND STABILIZATION**			
OTHER BMPs:		(N/A)		
ARE THESE BMPs FUNCTIONING PROPERLY?	(Y) (N)	(N/A)		
ARE CHANNELS AND OUTFALLS PROTECTED PROPERLY?	(Y) (N)	(N/A)		
ARE ANY OTHER BMPs NECESSARY?	(Y) (N)			
ARE ANY STABILIZATION MEASURES REQUIRED?	(Y) (N)			
HAZ ♦ MAT	**HAZARDOUS MATERIALS ONSITE**	**(N/A)**		
ARE HAZARDOUS CHEMICALS STORED PROPERLY?	(Y) (N)	(N/A)		
ARE FUEL TANKS PROPERLY LOCATED & PROTECTED?	(Y) (N)	(N/A)		
ARE CHEMICAL TOILETS PROPERLY LOCATED?	(Y) (N)	(N/A)		
IS DUMPSTER LOCATED & USED APPROPRIATELY?	(Y) (N)	(N/A)		
IS TRASH COLLECTED & STORED PROPERLY?	(Y) (N)	(N/A)		
ARE ANY IMPROPER WASHDOWN ACTIVITIES EVIDENT?	(Y) (N)	(N/A)		
IS ANY IMPROPER EQUIPMENT MAINTENANCE EVIDENT?	(Y) (N)	(N/A)		
ARE ANY IMPROPER DEWATERING PRACTICES EVIDENT?	(Y) (N)	(N/A)		

ADDITIONAL OBSERVATIONS AND COMMENTS:

CERTIFICATION: I CERTIFY UNDER THE PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHER THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

IF NO EXCEPTIONS FOUND, I CERTIFY THAT ALL CONTROLS ARE ACCEPTABLE AND THIS PROJECT IS IN COMPLIANCE WITH THE SWPPP AND THE CONSTRUCTION GENERAL PERMIT. ☐

SIGNATURE:

CES ADMIN. ONLY:

CLIENT: INITIAL INSP. ☐ RE-START ☐ DAY OF INSP.: ON HOLD ☐

FINAL INSP. ☐ TOTAL # OF INSP'S.: NEXT LOCATION:

SITE STABILIZED ☐ SITE NOT STABILIZED – CLIENT REQUESTED CLOSE OUT ☐ SITE NOT STABILIZED – ISSUE TRANSFER LETTER ☐

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NON-STORMWATER DISCHARGES

The following eligible non-Stormwater discharges at the site will be allowed only when such flows are diverted to site erosion and sediment control measures as detailed in Section 4 Controls:

- discharges from firefighting activities (firefighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
- uncontaminated fire hydrant flushing's (excluding discharges of hyper chlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life), which include flushing's from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushing's do not include systems utilizing reclaimed wastewater as a source water);
- water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where detergents and soaps are not used and where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;
- uncontaminated water used to control dust;
- potable water sources including waterline flushing's (excluding discharges of hyper chlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life);
- uncontaminated air conditioning condensate;
- uncontaminated ground water or spring water, including foundation or footing drains
- where flows are not contaminated with industrial materials such as solvents; and
- lawn watering and similar irrigation drainage.

OTHER PERMITTED DISCHARGES

Any discharge authorized under a separate NPDES, TPDES, or TCEQ permit may be combined with discharges authorized by this general permit, provided those discharges comply with the associated permit.

SPILL PREVENTION

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to Stormwater runoff.

Good Housekeeping Practices
The following good housekeeping practices will be followed onsite during the construction project.

- An effort will be made to store only enough products required to construct the project.
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer, and only when ready to be used.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The Project Superintendent will inspect daily to ensure proper use and disposal of materials onsite.

Hazardous Product Practices
These practices will be used to reduce the risks associated with hazardous materials, if hazardous materials are used.
Products will be kept in original containers unless they are not re-sealable.

- Original labels and material safety data will be retained.

- If surplus product must be disposed of, manufacturers' or local and state recommended methods for proper disposal will be followed.
- In the event that demolition of any structure with at least 10,000 square feet of floor space that was built or renovated before January 1980, will take place, and the receiving waterbody is impaired for polychlorinated biphenyls (PCBs):
- Implement control to minimize the exposure of PCB-containing building materials, including paint
- caulk and pre-1980 fluorescent lighting fixtures to precipitation and to stormwater; and ensure that disposal
- of such materials is performed in compliance with applicable state, federal and local laws.

POTENTIALLY POLLUTING MATERIALS

The following potential pollutants listed below are expected to be stored onsite during construction. As they are utilized, they or the waste material generated in utilizing them, may also be stored as waste material prior to being properly disposed of:

Material/Chemical	Physical Description	Stormwater Pollutants	Location *
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	Herbicides used for noxious weed control
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Plaster	White granules or powder	Calcium sulphate, calcium carbonate, sulfuric acid	Building construction
Cleaning solvents	Colorless, blue or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	No equipment cleaning allowed in project areas
Asphalt	Black solid	Oil, petroleum distillates	Streets and roofing
Concrete	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, building construction
Glue, adhesives	White or yellow liquid	Polymers, epoxies	Building construction
Paints	Various colored liquid	Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic	Building construction
Curing compounds	Creamy white liquid	Naphtha	Curb and gutter
Wood preserves	Clear Amber or dark brown liquid	Stoddard solvent, petroleum distillates, arsenic, copper, chromium	Timber pads and building construction
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment/staging area
Diesel Fuel	Clear, blue green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	Secondary containment/staging area
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	Secondary containment/staging area
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment
Sanitary toilets	Various colored liquid	Bacteria, parasites and viruses	Staging area

*** Area where material/chemical is used on site.**

PRODUCT SPECIFIC PRACTICES

The following product specific practices will be followed onsite:

Petroleum Products
All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers, which are clearly labeled. Any asphalt substances used onsite will be applied according to manufacturer's recommendations.

Paints
All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the Stormwater sewer system but will be properly disposed of according to manufacturer's instructions or State and local regulations.

Fertilizers
Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to Stormwater. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills or suitably covered storage area.

Concrete Trucks
Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash on this site, except into a specified and properly designated area designed for this purpose.

SPILL PREVENTION PRACTICES

In addition to the good housekeeping and material management practices discussed above, the following practices will be followed for spill prevention and cleanup:

- Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency regardless of size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The Project Superintendent responsible for day-to-day site operations will be the spill prevention and cleanup coordinator. He will designate other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup.

RELEASES IN EXCESS OF REPORTABLE QUANTITIES

The discharge of hazardous substances or oil in the Stormwater discharges will be prevented or minimized as provided below. The General Contractor will comply with the reporting requirements under the Construction General Permit. Spills or releases will be reported immediately to the Texas Commission on Environmental Quality 800.832.8224. The SWPPP will be modified within 14 days to provide description of release, circumstances leading to release and the date of the release.

SPILL RESPONSE PLAN

Leak or Spill

- Employees will not be punished for reporting spills.
- Contain spill and start cleanup
- Report if over reportable quantity.

Point of Contact in Case of Reportable Quantity Release

Texas Commission on Environmental Quality 800.832.8224

Reportable Quantities		
Material	**Material Released To**	**Reportable Quantity**
Engine oil, fuel, hydraulic & brake fluid	Land	~25 gallons
Engine oil, fuel, hydraulic & brake fluid	Water	Visible Sheen
Anti-freeze	Land	100 lbs (~13 Gallons)
Battery Acid	Land, Water	100 lbs (~6 Gallons)
Freon	Air	1 lb
Gasoline	Air, Land, Water	100 lbs (~15 Gallons)
Engine Degreasers	Air, Land, Water	100 lbs (~14 Gallons)

Information to Report
When making a telephone report of a spill or pollution complaint, it will be helpful if the following information is available:
The date and time of the spill or release;

- The identity or chemical name of material released or spill as well as whether the substance is an extremely hazardous material;
- An estimate of the quantity of material released or spilled and the time or duration of the event;
- The exact location of the spill, including the name of the waters involved or threatened, and/or other medium or media affected by the release or spill;
- The source of the release or spill;
- The name, address, and telephone number of the party in charge of, or responsible for the facility, vessel, or activity associated with the release or spill;
- The extent of actual and potential water pollution;
- The party at the release or spill site, who is in charge of operations at the site and the telephone number of this party;
- The steps being taken or proposed to contain and clean up the released or spilled material and any precautions taken to minimize impacts including evacuation;
- The extent of injuries, if any;
- Any known or anticipated health risks associated with the incident and, where appropriate, advice regarding medical attention necessary for exposed individuals;
- Possible hazards to the environment (air, soil, water, wildlife, etc.). This assessment may include references to accepted chemical databases, material safety data sheets, and health advisories. Estimated or measured concentrations of a contaminant may be requested by the TCEQ for the state's hazard assessment; and,
- Identity of governmental and/or private sector representatives responding on-scene.

POTENTIALLY POLLUTING ACTIVITIES

The activities in the following chart have been identified as potentially polluting. The Best Management Practices described in this section, and those described in Section 4 Controls are to be implemented to protect the water quality of any discharge from this site or escape to any adjacent waterway.

Areas of Consideration	Primary Pollutant	Other Pollutants							
	Sediment	Nutrients	Heavy Materials	pH (acids & bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris & Solids	Other Toxic Chemicals
Clearing, grading, excavating and unstabilized areas	✓							✓	
Paving operations	✓							✓	
Concrete washout and waste			✓	✓				✓	
Structure construction/painting/clearing		✓		✓				✓	✓
Demolition and debris disposal	✓							✓	
Dewatering operations	✓	✓							
Drilling and blasting operations	✓			✓				✓	
Material delivery and storage	✓	✓	✓	✓	✓	✓		✓	✓
Material use during building process		✓	✓	✓	✓	✓		✓	✓
Solid waste (trash and debris)								✓	✓
Hazardous waste				✓	✓	✓			✓
Contaminated spills		✓	✓	✓	✓	✓			✓
Sanitary/septic waste		✓		✓			✓		✓
Vehicle/equipment fueling and maintenance						✓			✓
Vehicle/equipment use and storage						✓			✓
Landscaping operation	✓	✓						✓	

Although not required under the General Permit, details for suggested Best Management Practices are found in this section. They may differ from those found in the construction drawings, and in that case, these should be considered recommended alternatives. It is the Operator's responsibility to select the most effective control for specific site conditions.

Items Specified for Erosion Control

- Dust Control

Items Specified for Runoff Control

- Check Dams and Other Flow Control Barriers
  - Straw Wattles
  - GeoHay
  - Erosion Eels
- Dewatering Devices
  - Dirtbag
  - Site constructed dewatering system

Items Specified for Sediment Control

- Filter Fabric Fence
  - Slice-inserted Silt fence
  - Reinforced Silt Fence (trenched)
  - Rock on Tail
- Inlet Protection Barrier
  - Siltsack IPB
  - GutterGator IPB
  - GrateGator IPB
  - Gutter Eels
- Stabilized Construction Exit

Items Specified for Good Housekeeping/Materials Management

- Concrete Washout
- Spill Response Kit

EROSION EEL (100% Rubber Erosion Eel)

Product Description:
The Erosion Eel is highly effective sediment-control product used at construction sites to prevent suspended soils from contaminating area streams and wetlands during storm events. It is a sediment tube filled with an effective filter ballast material, consisting of 100% shredded, recycled tire rubber.

Applications:
The Erosion Eel is used on any active construction site where soils have been disturbed. The Eel is used in lieu of silt fencing, rock check dams, wattles, hay bales, gravel bags, and other conventional BMP items. The Eel can be used for perimeter controls, check dams, and diversion berms.

Product Dimensions and Weights:

The Erosion Eel comes in four sizes:

- 9.5-inch diameter, 2.5 ft length
- 9.5-inch diameter, 10 ft length
- 9.5-inch diameter, 4.5 ft length
- 20-inch diameter, 10 ft length

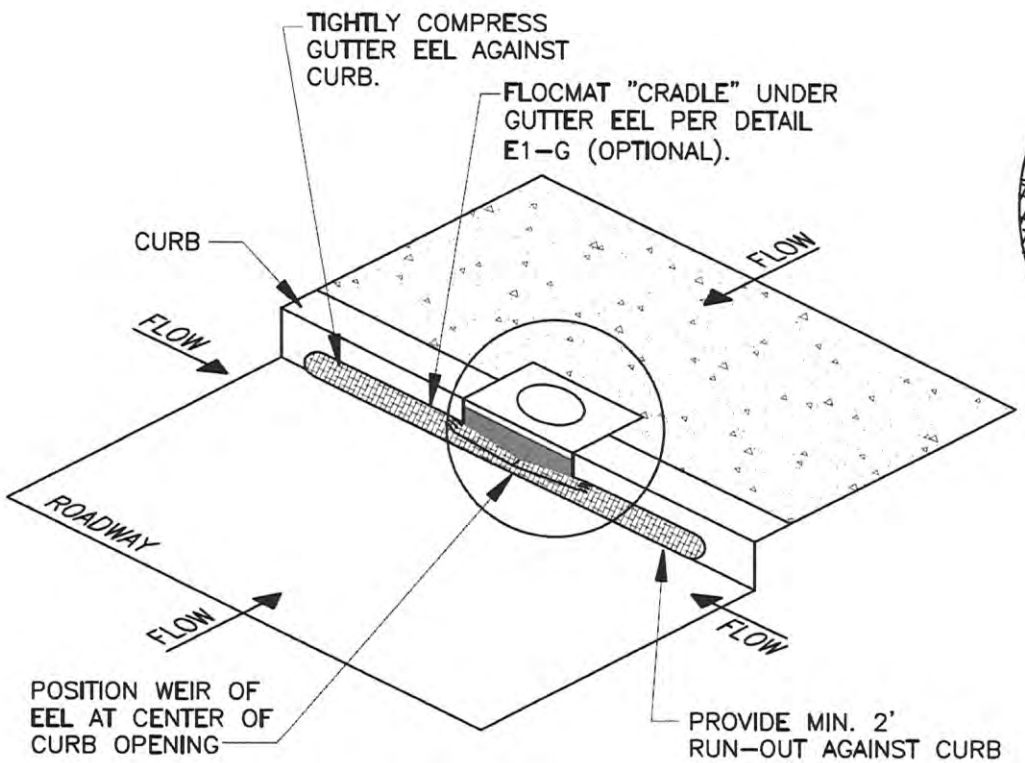
The unit weight per foot for each manufactured diameter is:

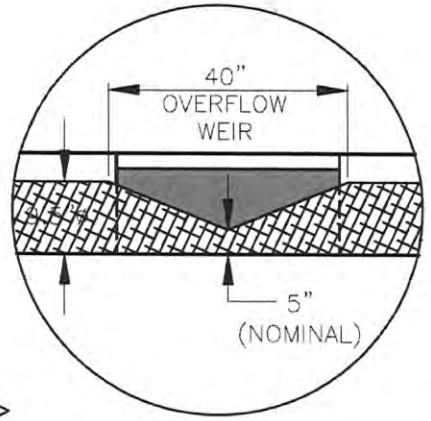
- 9.5-inch diameter = 14 lbs/ft
- 20-inch diameter = 60 lbs/ft

Interior Filter Material:
Shredded, recycled, used, tire, rubber particles. Greater than 98% of metal is removed from shredded rubber filtrate material. The rubber is washed during manufacturing.

Interior Filter material Particle Size Gradation:
½ inch to ¾ inch for 9.5-inch diameter Eel. 2-inch size for 20-inch Eel.

Installation Requirements:
Each Eel is designed with high-strength handles. One can move the Eels either manually (e.g., two individuals holding onto the handles at both ends of the Eel, or one person dragging the Eel by one of the end handles) or can be moved mechanically using any number of different types of construction equipment. The Eel does not require any ground disturbance at all. Staking is only required for applications when the Eel is used as a check dam (concentrated flow applications). Also, the Eels need to be staked on steep hillsides (>25%).





NOTE:
PERIODIC MAINTENANCE SHALL INCLUDE CLEANING GUTTER EEL SURFACE WITH HIGH PRESSURE WASH OR BRUSHING SURFACE WITH BROOM.

ISOMETRIC DETAIL E3–C: SMALL CURB INLET SEDIMENT TRAP – GUTTER EEL
N.T.S.

SILT FENCE - INSTALLATION

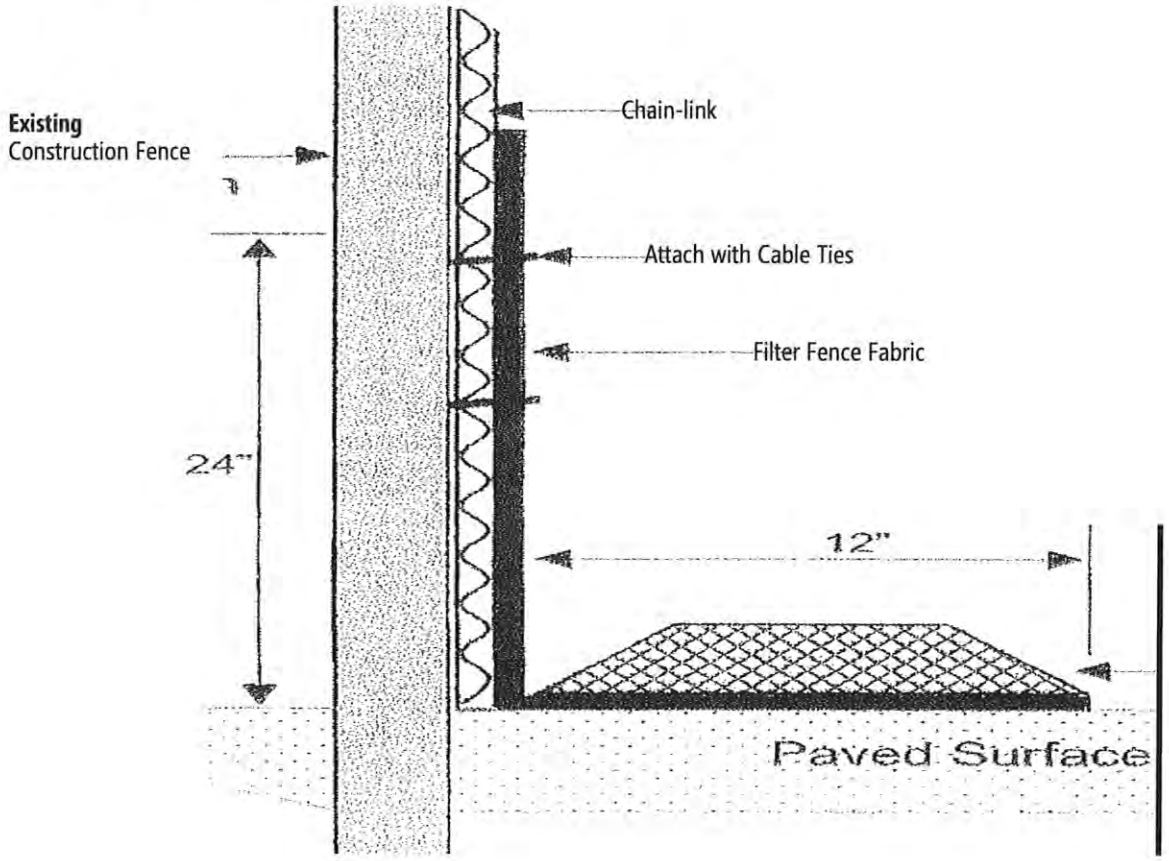
Specifications for Non-Wire Backed Static Slicing Method for Silt Fence Installation

Static slicing must be used to anchor silt fence fabric in order to not use the wire backing. Other fabric anchoring methods are not acceptable substitutes when using this detailed installation.

- Silt fence shall be installed per ASTM D-6462-03 Latest Edition.
- Install posts at a maximum of 6'-7' apart.
- Install posts at a minimum depth of 16" on the downstream side of the silt fence, and as close as possible to the fabric, enabling posts to support the fabric from upstream water pressure.
- Install posts with the nipples facing away from the silt fence fabric.
- Attach the fabric to each post with three ties, all spaced within the top 8" of the fabric. Attach each tie diagonally 45 degrees through the fabric, with each puncture at least 1" vertically apart. also, each tie should be positioned to hang on a post nipple when tightened to prevent sagging.
- Wrap approximately 6" of fabric around the end posts and secure with three ties.
- When necessary to continue fence, overlap geotextile across two posts.
- No more than 24" of a 36" fabric is allowed above ground level.
- Drive post a minimum of 16" into the ground.
- The installation should be checked and corrected for any deviations before compaction. Use a flat-bladed shovel to tuck fabric deeper into the slit if necessary.
- Compacting is vitally important for effective results. Compact the soil immediately next to the silt fence fabric with the front wheel of the tractor, skid steer, or roller exerting at least 60 pounds per sq. inch. Compact the upstream side first, and then each side twice for a total of four trips.
- Maintenance shall be performed as noted in the SWPPP. Depth of the accumulated sediments may not exceed ½ the height of the fence. Maintenance cleanout must be conducted regularly to prevent accumulated sediments from reaching ½ the height of the fence fabric above grade.
- When two sections of geotextile adjoin each other, they shall be overlapped across two posts, 60" min. as shown.
- Add post caps as needed based on site conditions and applicable agency requirements.

PERIMETER CONTROL

Paved Surface - Construction Perimeter Fence in Place



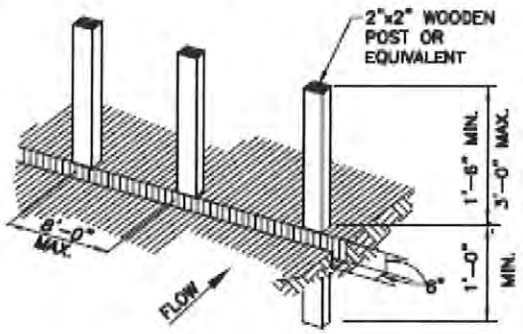
This BMP is Indicated:
When perimeter control is required on a paved surface, or other hard surface where it is desirable not to disturb the surface, and when an existing or proposed perimeter fence is to be in place at the time of installation of the control.

This BMP is Constructed:
By attaching Filter Fence Fabric to existing chain-link perimeter fence at a point approximately 24" above the paved surface. Attachment is made to the fence, with 501b UV protected Cable Ties. Remaining 12" fabric tail is placed on the pavement, and oriented toward the construction area. Washed rock, 1" and larger, is placed on the fabric tail, to a minimum depth of 2".

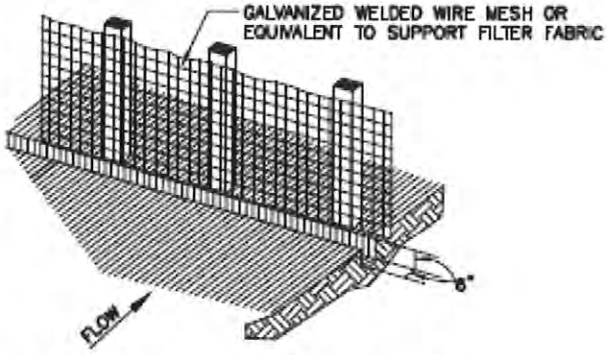
This BMP is Effective:
Because the weighted tail provides positive surface contact, forcing migrating water to filter through the rock and fabric before exiting the site. It allows viable perimeter control when traditional Silt Fence is not practicable due to surface or location related constraints.

REINFORCED FILTER FABRIC BARRIER

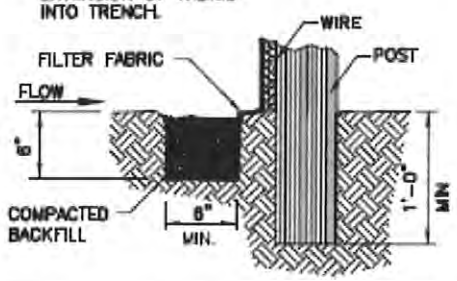
1. SET POSTS AT REQUIRED SPACING AND DEPTH. EXCAVATE 6" x 6" TRENCH UPSLOPE ALONG THE LINE OF POSTS.



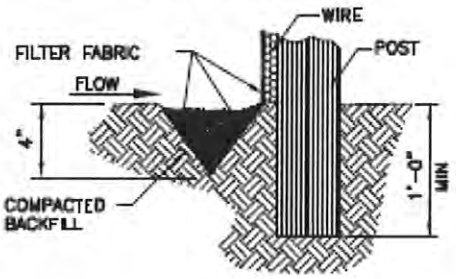
2. SECURE MESH FENCING TO POSTS



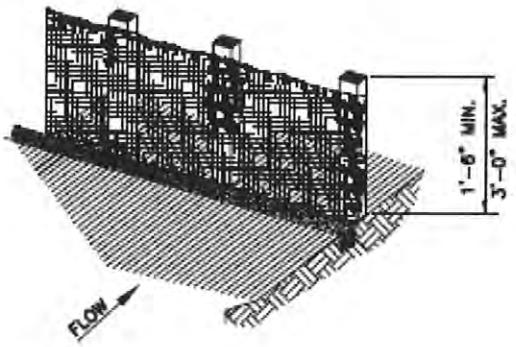
EXTENSION OF FABRIC INTO TRENCH



ALTERNATE V-TRENCH EXTENSION OF FABRIC INTO TRENCH



3. ATTACH FILTER MATERIAL TO WIRE FENCE AND EXTEND IT INTO THE TRENCH. BACKFILL AND COMPACT THE EXCAVATED SOIL.



Notes:

- Provide wooden stakes or steel fence supports having a minimum length of 4 feet.
- For reinforced fence, provide mesh reinforcement of galvanized 2 inch by 4-inch welded wire fabric mesh or plastic grid mesh reinforcement
- Securely fasten mesh fencing to posts with staples or tie wires
- Securely fasten filter fabric to mesh fencing.
- When two sections of filter fabric adjoin each other, overlap 6" at a post, fold together, and attach to a post.
- Remove sediment deposits when silt reaches 1/3 of the height of the fence depth.

SILTSACK® (Catch Basin Sediment Control)

Description:

This work shall consist of furnishing, installing, maintaining, and removing SILTSACK® Sediment Control Device as directed by the engineer or as shown on the contract drawings. The SILTSACK® Sediment Control Device is manufactured by:

ACF Environmental, Inc.
2831 Cardwell Drive
Richmond, Virginia 23234
Phone: 800-448-3636
Fax: 804.743.7779

Materials:

SILTSACK®

- The SILTSACK® shall be manufactured from a woven polypropylene and sewn by a double needle machine, using a high strength nylon thread.
- The SILTSACK® seams shall have a certified average wide width strength per ASTM D-4884 standard as follows:

SILTSACK® Style	Test Method	Test Method
Regular Flow	ASTM D-4884	165.0 lbs/in
High-Flow	ASTM D-4884	114.6 lbs/in

- The SILTSACK® will be manufactured to fit the opening of the catch basin or drop inlet. The SILTSACK® will have the following features: two dump straps attached at the bottom to facilitate the emptying of the SILTSACK®; The SILTSACK® shall have lifting loops as an integral part of the system to be used to lift the SILTSACK® shall have a restraint cord approximately halfway up the sack to keep the sides away from the catch basin walls, this yellow cord is also a visual means of indicating when the sack should be emptied. Once the strap is covered with sediment, the SILTSACK® should be emptied, cleaned, and placed back into the basin.
- The geotextile fabric shall be woven polypropylene fabric with the following properties:

Property	Test Method	Test Result
Grab Tensile	ASTM D-4632	300 lbs
Grab Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	120 lbs
Mullen Burst	ASTM D-3786	800 P.S.I.
Trapezoid Tear	ASTM D-4533	120 lbs
UV Resistance	ASTM D-4355	80%
Apparent Opening	ASTM D-4751	40 US Sieve
Flow Rat	ASTM D-4491	40 Gal/Min/Ft^2
Permittivity	ASTM D-4491	0.55 sec^{-1}

SILTSACK® High-Flow

Property	Test Method	Test Results
Grab Tensile	ASTM D-4632	265 lbs
Grab Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	135 lbs
Mullen Burst	ASTM D-3786	420 P.S.I.
Trapezoid Tear	ASTM D-4533	45 LBS
UV Resistance	ASTM D-4355	90%
Apparent Opening	ASTM D-4751	20 US Sieve
Flow Rate	ASTM D-4491	200 Gal/Min/Ft^2
Permittivity	ASTM D-4491	1.5 sec^{-1}

All properties are minimum average roll values

Construction Sequence:

- To install the SILTSACK® in the catch basin, remove the grate and place the sack in the opening. Hold out approximately six inches of the sack outside the frame. This is the area of the lifting straps. Replace the grate to hold the sack in place.
- The SILTSACK® is full and should be emptied when the restraint cord is no longer visible.
- To remove the SILTSACK®, take two pieces of 1" diameter rebar and place through the lifting loops on each side of the sack to facilitate the lifting of the SILTSACK®.
- To empty the SILTSACK®, place it where the contents will be collected. Place the rebar through the lift strap
- The SILTSACK® is reusable. Once the construction cycle is complete, remove the SILTSACK® from the basin and clean. The SILTSACK® should be stored out of the sunlight until needed on another project.

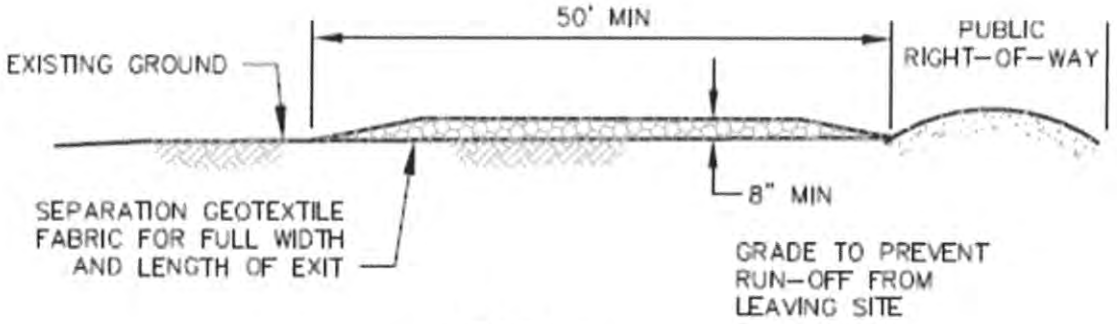
Basis of Payment:

Payment for all SILTSACKS® used during the construction is to be included in the bid price for the overall erosion and sediment control plan unless unit price is requested. Maintenance of SILTSACK® also to be included in this price.

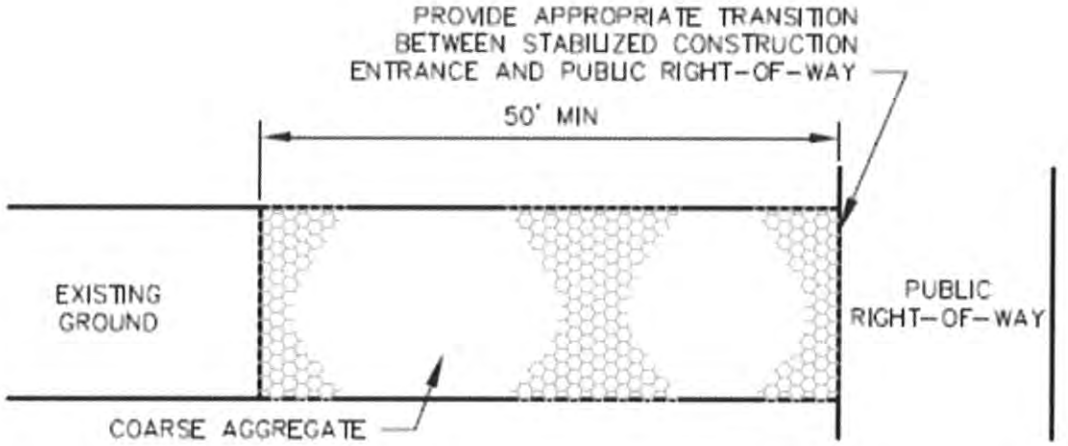
Available From:

Construction EcoServices
13810 Hollister Drive, #100
Houston, TX 77086
(832) 456-1000

STABILIZED CONSTRUCTION EXIT



PROFILE



PLAN

Notes:

- Length shall be as shown on the constr5uction drawings, but not less than 50 feet
- Thickness shall be not less than 8"
- Width shall be not less than full width of all points of ingress or egress.
- Stabilization for other areas shall have the same aggregate thickness and width requirements as the stabilized construction exit, unless otherwise shown on the construction drawings
- Stabilized area may be widened or lengthened to accommodate a truck washing area. An outlet sediment trap must be provided for the truck washing area.
- Stabilized construction exit shall be maintained free of sediment for the duration of the project.

GUTTERGATOR™

Description:

This work shall consist of furnishing, installing, maintaining, and removing GutterGator Sediment Control Device as directed by the engineer or as shown on the contract drawings. The GutterGator Sediment Control Device is manufactured by:

ACF Environmental, Inc.
2831 Cardwell Drive
Richmond, Virginia 23234
Phone: 800-448-3636
Fax: 804.743.7779

Materials:

GutterGator

The GutterGator will be manufactured to 3′ molds in 3′, 6′, 9′, 12′, 15′ and 18′ lengths and a minimum of twenty-four (24) inches longer than the curb inlet opening. This will allow for sufficient length to cover the inlet with twelve (12) inches beyond the inlet on both ends.

Construction Sequence

- Install the GutterGator in front of the curb inlet opening. Drop 7lb weight sock into inlet opening, secure tie back straps, if applicable. Each end of the GutterGator should overlap the curb inlet approximately 12″.
- The GutterGator should be cleaned if a visual inspection shows sediment and debris build up around the GutterGator.
- To remove the GutterGator, lift out of curb opening with provided carrying handle.
- The GutterGator is reusable. Once the construction project is complete and it is no longer needed for sediment control, remove, clean and store it out of the sunlight until needed on the next project.
- Ponding is likely if sediment is not removed regularly. Inspection of GutterGator should be on a regular basis and immediately after wet weather.

Basis of Payment:

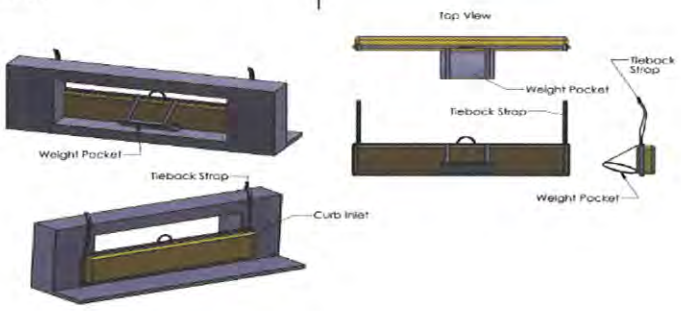
Payment for GutterGator used during the construction is to be included in the bid price for the overall erosion and sediment control plan and priced by the linear foot.

Installation and Maintenance:

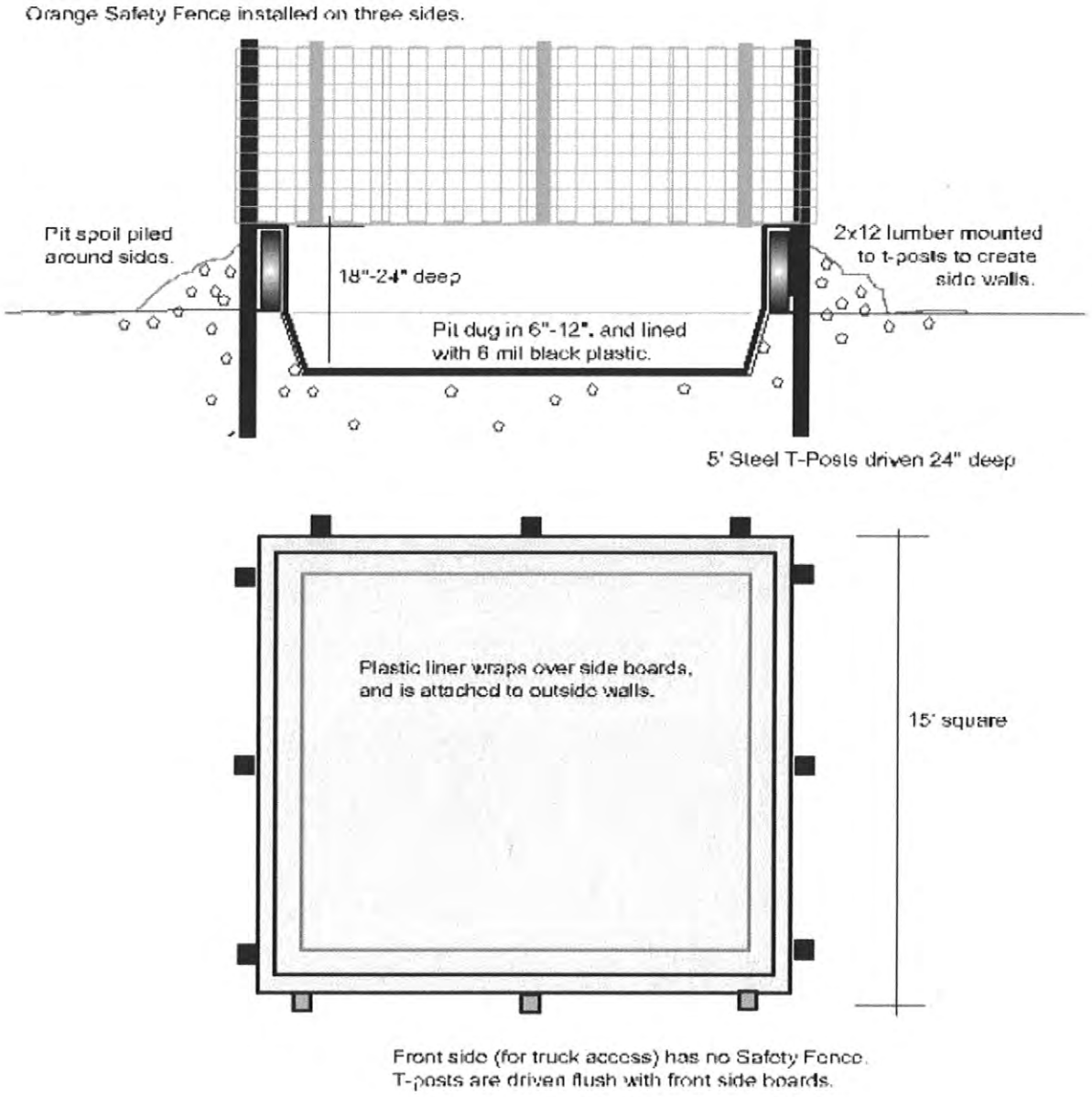
- Place GutterGator on the ground near the curb inlet.
- Place unit in curb inlet so weighted flap hangs down in the curb inlet holding GutterGator firmly in place.
- Center unit so 1′ of GutterGator extends beyond each end of curb inlet.
- Secure tie back straps with sod pin or stake if applicable.
- Inspection each wet weather event is recommended.
- Remove all sediment and debris from surface after each wet weather event.
- Remove GutterGator, clean out and replace, as needed.

Available From:

Construction EcoServices
13810 Hollister Drive, #100
Houston, TX 77086
(832) 456-1000



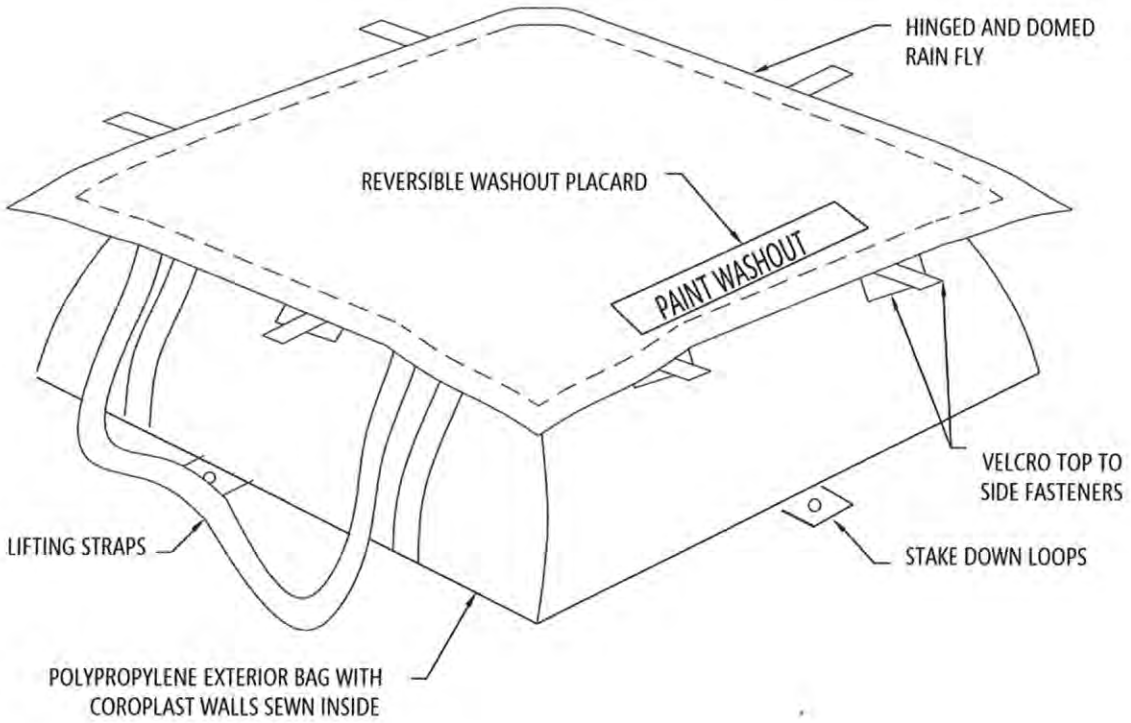
CONCRETE WASHOUT



Notes:

- The purpose of this BMP is to provide a controlled location for the dumping of waste concrete and concrete truck washout water. With its liner, this BMP will trap the waste concrete liquids, keeping them from leaching into the soil and allowing them to evaporate.
- The solids can then be removed and disposed of properly.

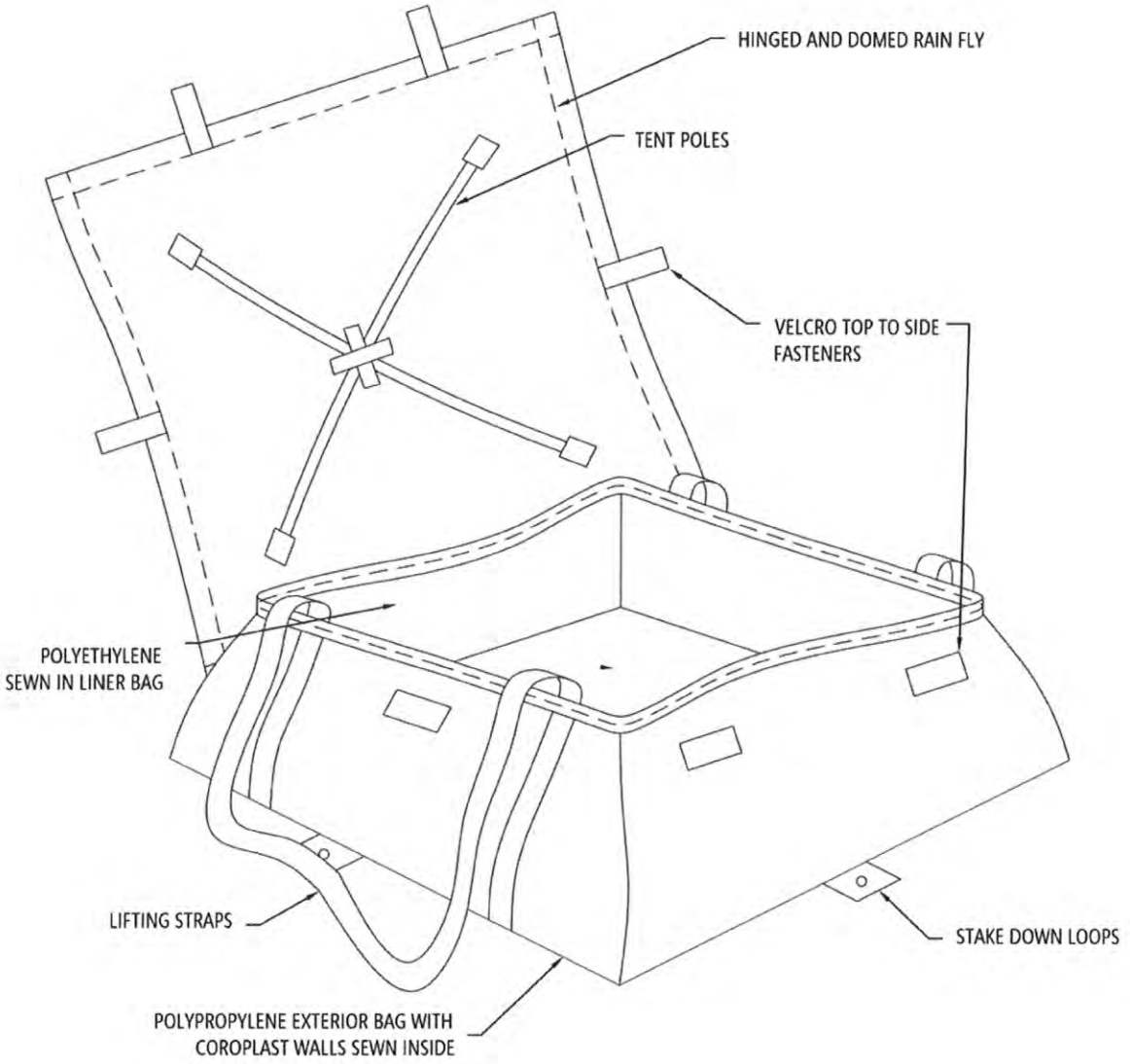
CONCRETE WASHOUT (Continued)



Notes:

- The washout shall be installed prior to using materials that require washout on this project.
- As necessary, signs shall be placed throughout the site to indicate the location of the washout.
- The washout area will be replaced as necessary to maintain capacity for liquid waste.
- Washout residue shall be removed from the site and disposed of at an approved waste facility.
- Do not washout into storm drains, open ditches, streets, or streams.
- Avoid dumping excess concrete in non-designated dumping areas.
- Locate washout at least 50' (15 meters) from storm drain, open ditches, or water bodies.
- The washout shall be used only for non-hazardous wastes.
- Let washout set or evaporate before lifting. do not move wet.

CONCRETE WASHOUT (Continued)



CONCRETE WASHOUT (Continued)

PART 1: GENERAL

1.01 Description

- Work shall consist of furnishing and installing an ALL-WEATHER WASHOUT in accordance with these specifications and in conformity with the plans.
- Work includes preparing foundation soil, furnishing and installing leveling pad, washout setup and removal and disposal of washout

1.02 Submittals/Certification

- Contractor shall submit a Manufacturer's certification, prior to start of work, that the washout meets the requirements of this specification.

- The washout location should be shown on the Project specific Stormwater Pollution Plan (SWPPP) drawings or Erosion and Sediment Control Plan (ESCP) drawings.

1.03 Delivery, Storage and Handling

- Contractor shall check all materials upon delivery to assure that the size, type, and quantities have been received.
- Contractor shall protect all materials from damage due to jobsite conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Washout

- The Washout consists of a heavy-duty, woven polypropylene outer bag with 6-mm corrugated plastic inner walls, a 6-mm polyethylene liner. The Washout comes in two available dimensions, 45"x45"x16"h or 75"x75"x12" h.

2.02 Rain Fly

- Hinged and domed (tent poles) 5 oz. attached rain fly with Velcro straps.

2.03 Lifting Straps

- Four lifting straps stitched from two sides of the 2" black stiff webbing with 5000 lbs. min tensile strength.

2.04 Sign

- Pre-printed, reversible sign for either concrete or paint washout.

2.05 Base

- Material shall consist of native or imported soil. May also be level asphalt or concrete surface.

PART 3: EXECUTION

3.01 Prepare Level Surface

- Locate level area to deploy. The washout should be located away from storm drains, gutters, or other stormwater conveyances as much as practical.
- Clear area where washout is to be deployed of debris, rocks, and other materials that may puncture the liners. If rocks or other debris cannot be removed, cover protection with imported sand.

3.02 Set Up Washout

- Locate a level area to deploy the Washout and clear it of any debris that may cause damage.
- Unfold the washout on level ground.
- Unroll the rain fly and insert the provided tent poles into the corner slots. Secure the poles together using the straps sewn to the underside of the rain fly.
- Place the washout in an appropriate location, away from storm drains and accessible to trucks.
- Stake down in necessary.
- If a storm is imminent secure the rain fly using the Velcro straps to prevent overflow.

3.03 Dispose ALL-WEATHER Washout

- After the Washout has been filled with washout residue, allow the wastewater to evaporate leaving only solid concrete residue Wastewater can be pumped form the washout and disposed of a facility permitted to receive liquid waste. Alternatively, use ALL-WEATHER'S Slurry Solution to solidify wastewater.
- After residue has dried, load the hardened unit onto a flat-bed truck or dump truck with construction equipment such as a forklift or loader. Full, hardened units can be stacked for easy transportation.

3.04 Field Quality Control

- Check washout unit for leaks ensure wash water is not leaking out of washout.
- Stake down the washout if necessary. Tie down the rainfly with straps when needed.
- Do not move wet.
- Washouts may be used for multiple washout events and concrete placement events. Make sure that the washout has enough free space to hold the next planned washout event.
- If the washout is moved, note the new location in the project stormwater pollution prevention documents.

STRAW WATTLE - INSTALLATION

Proper installation of the straw wattle is essential to ensure the success of the product. Straw wattles are designed for low surface flows, not to exceed one cfs for small areas. While they work well on-stream banks, they should not be placed in the path of high-water flow. On slopes, wattles should be installed on contour with a slight downward angle at the end of the row to prevent ponding at the mid-section. No overall slope preparation is needed prior to installation; however, straw wattles should always be installed in shallow trenches according to the guidelines given below. Running lengths of wattles should be abutted firmly to ensure no leakage at the abutments. Guidelines regarding vertical spacing are given below. The wattles should be pinned securely to the ground according to instructions to ensure their stability and the success of the installation.

Spacing - Downslope
Vertical spacing for slope installations should be determined by site conditions: slope gradient and soil type are the main factors.

A good rule-of-thumb is:

- 1:1 slopes = 10 feet apart
- 2:1 slopes = 20 feet apart
- 3:1 slopes = 30 feet apart
- 4:1 slopes = 40 feet apart, etc.



However, adjustments may have to be made for the soil type:

- For soft, loamy soils - adjust the rows closer together.
- For hard, rocky soils - adjust the rows further apart.

Trenching
Use a hand tool such as a maddox or pick to score the ground. Using a shovel, dig the trench to the needed depth. Soil from excavating the trenches can be placed on the uphill, or flow side, of the trench to be used during installation.

- For soft, loamy soils: dig a 3"-5" trench.
- For hard, rocky soils: dig a 2"-3" trench.

Installing
Lay the first straw wattle snugly in the trench. No daylight should be seen under the wattle. Pack soil from trenching against the wattle on the uphill side. When installing running lengths of straw wattles, you must butt the second wattle tightly against the first wattle. DO NOT overlap the ends on top of each other. Overlapping behind each other has been done with some success. Stake the straw wattles at each end and 4' on center.

For example:

- 25-foot wattle uses 6 stakes
- 20-foot wattle uses 5 stakes
- 12-foot wattle uses 4 stakes

Stakes should be driven through the middle of the wattle, leaving 2-3 inches of the stake protruding above the wattle. A heavy sediment load will tend to pick the wattle up and could pull it off the stakes if they are driven down too low. It may be necessary to make a hole in the wattle with the pick end of your maddox in order to get the stake through the straw. When straw wattles are used for flat ground applications, drive the stakes straight down; when installing wattles on slopes, drive the stakes perpendicular to the slope.

Drive the first end stake of the second wattle at an angle toward the first wattle in order to help about them tightly together. If you have difficulty driving the stake into extremely hard or rocky slopes, a pilot bar may be needed to begin the stake hole.

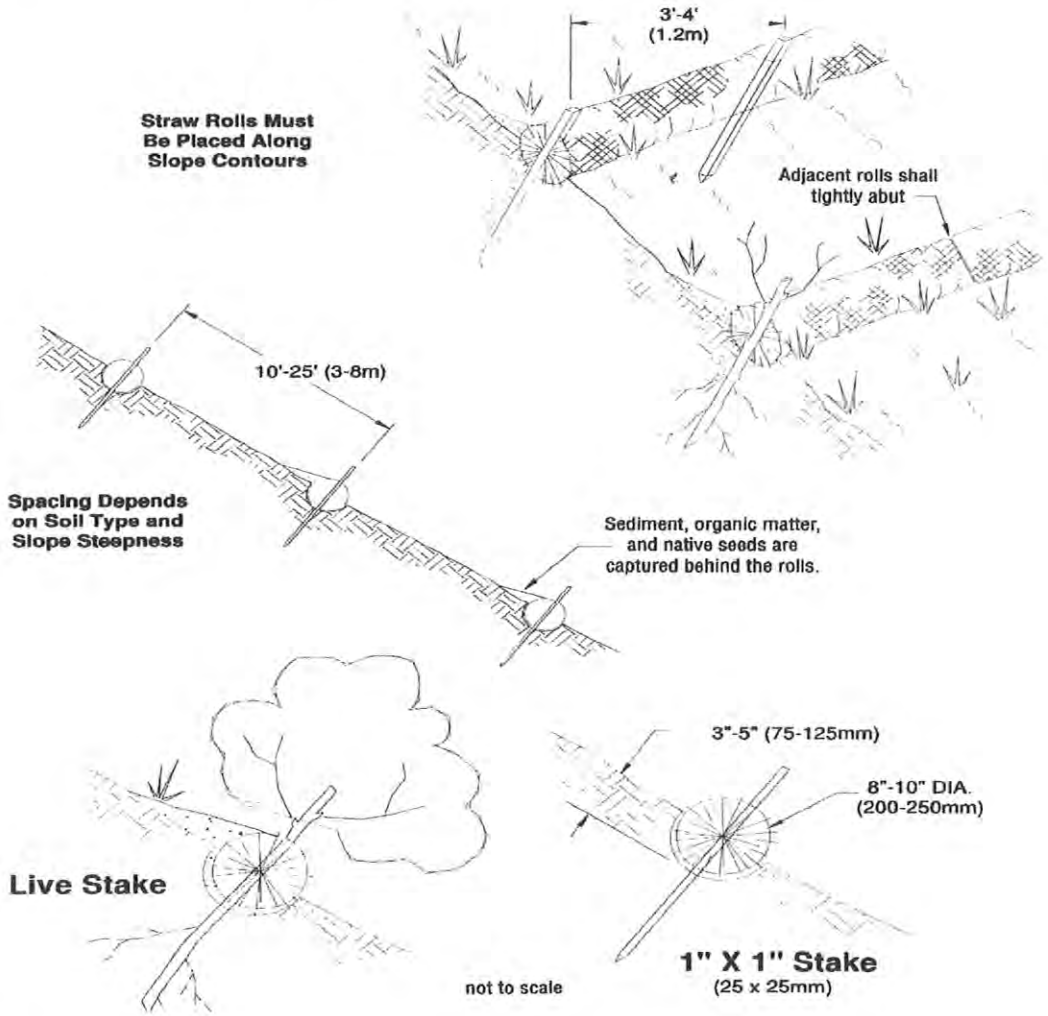
Flat Ground Applications

For installations along sidewalks or behind curbs it may not be necessary to stake the wattles, however, trenches must still be dug. If you have not yet back filled behind the sidewalk or curb, lay the wattle snuggly against it first, then backfill behind the wattle. Your trench is done! For installations around storm drains and inlets, trenches and staking will be needed.

Fit wattle in trench snugly up against the sidewalk or curb. Around storm drains or inlets, the wattle should be back 1–1½ ft. and should direct water flow toward the angle of drainage. If all drainage angles into the inlet, snake the wattle all the way around the inlet, using more than one wattle if needed.

Staking

We recommend using wood stakes or willow cuttings, rather than metal pins, to secure the straw wattles. Wood stakes will eventually bio-degrade, and willow cuttings will grow and provide extra stabilization. Be sure to use a stake that is long enough to protrude several inches above the wattle: 18" is a good length for hard, rocky soil. For soft, loamy soil use a 24" stake for greater security. The diameter of the stake should be approximately 1" for ease of driving through the wattle.



Note:

- Straw roll installation requires the placement and secure staking of the roll in a trench 3"-5" (75-125mm) deep, dug on contour. Runoff must not be allowed to run under or around the roll.

A COPY OF THE CONSTRUCTION GENERAL PERMIT CAN BE FOUND IMMEDIATELY BEHIND THIS PAGE.

General Permit to Discharge Under the Texas Pollutant Discharge Elimination System

Stormwater Discharges Associated with Construction Activities

TXR150000

Effective March 5, 2018

printed on recycled paper

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Texas Commission on Environmental Quality

P.O. Box 13087, Austin, Texas 78711-3087

GENERAL PERMIT TO DISCHARGE UNDER THE

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

This permit supersedes and replaces
TPDES General Permit No. TXR150000, issued March 5, 2013

Construction sites that discharge stormwater associated with construction activity

located in the state of Texas

may discharge to surface water in the state

only according to monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ or Commission), the laws of the State of Texas, and other orders of the Commission of the TCEQ. The issuance of this general permit does not grant to the permittee the right to use private or public property for conveyance of stormwater and certain non-stormwater discharges along the discharge route. This includes property belonging to but not limited to any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This general permit and the authorization contained herein shall expire at midnight, five years from the permit effective date.

EFFECTIVE DATE: March 5, 2018

ISSUED DATE: 2-8-18

Bryan W. Shaw

For the Commission

TPDES GENERAL PERMIT NUMBER TXR150000 RELATING TO STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

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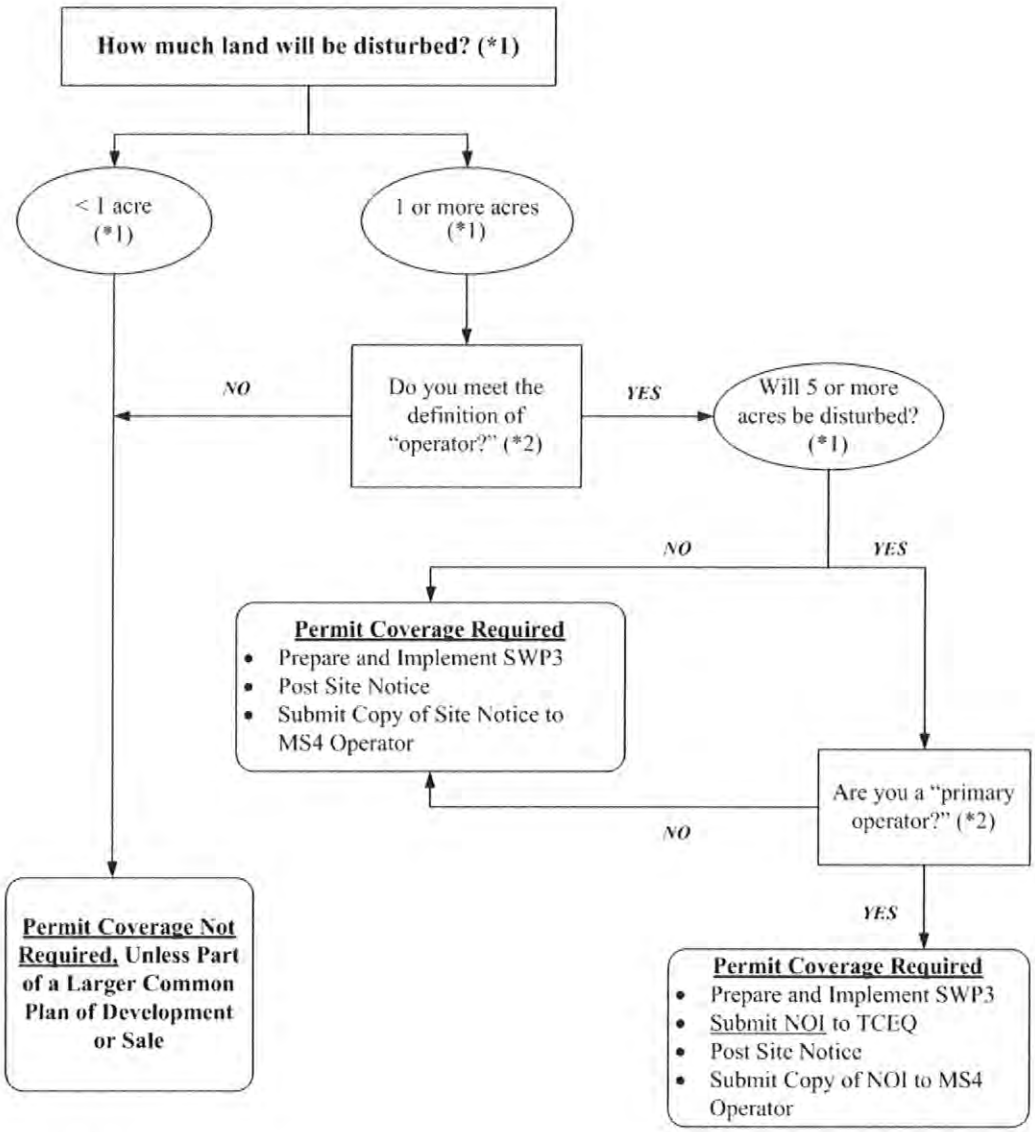
Part I. Flow Chart and Definitions

Section A. Flow Chart to Determine Whether Coverage is Required

When calculating the acreage of land area disturbed, include the disturbed land-area of all construction and construction support activities.



(*1) To determine the size of the construction project, use the size of the entire area to be disturbed, and include the size of the larger common plan of development or sale, if the project is part of a larger project (refer to Part I.B., "Definitions," for an explanation of "common plan of development or sale").

(*2) Refer to the definitions for "operator," "primary operator," and "secondary operator" in Part I., Section B. of this permit.

Section B. Definitions

Arid Areas - Areas with an average annual rainfall of 0 to 10 inches.

Best Management Practices (BMPs) - Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Commencement of Construction - The initial disturbance of soils associated with clearing, grading, or excavation activities, as well as other construction-related activities (e.g., stockpiling of fill material, demolition).

Common Plan of Development - A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located ¼ mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction Activity - Includes soil disturbance activities, including clearing, grading, excavating, construction-related activity (e.g., stockpiling of fill material, demolition), and construction support activity. This does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction Support Activity – A construction-related activity that specifically supports construction activity, which can involve earth disturbance or pollutant-generating activities of its own, and can include, but are not limited to, activities associated with concrete or asphalt batch plants, rock crushers, equipment staging or storage areas, chemical storage areas, material storage areas, material borrow areas, and excavated material disposal areas. Construction support activity must only directly support the construction activity authorized under this general permit.

Dewatering – The act of draining rainwater or groundwater from building foundations, vaults, and trenches.

Discharge – For the purposes of this permit, the drainage, release, or disposal of pollutants in stormwater and certain non-stormwater from areas where soil disturbing activities (e.g., clearing, grading, excavation, stockpiling of fill material, and demolition), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck wash out, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

Drought-Stricken Area – For the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are

likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html.

Edwards Aquifer - As defined under Texas Administrative Code (TAC) § 213.3 of this title (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone - Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the Texas Commission on Environmental Quality (TCEQ) and the appropriate regional office. The Edwards Aquifer Map Viewer, located at http://www.tceq.texas.gov/compliance/field_ops/eapp/mapdisclaimer.html, can be used to determine where the recharge zone is located.

Edwards Aquifer Contributing Zone - The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer. The contributing zone is located upstream (upgradient) and generally north and northwest of the recharge zone for the following counties: all areas within Kinney County, except the area within the watershed draining to Segment No. 2304 of the Rio Grande Basin; all areas within Uvalde, Medina, Bexar, and Comal Counties; all areas within Hays and Travis Counties, except the area within the watersheds draining to the Colorado River above a point 1.3 miles upstream from Tom Miller Dam, Lake Austin at the confluence of Barrow Brook Cove, Segment No. 1403 of the Colorado River Basin; and all areas within Williamson County, except the area within the watersheds draining to the Lampasas River above the dam at Stillhouse Hollow reservoir, Segment No. 1216 of the Brazos River Basin. The contributing zone is illustrated on the Edwards Aquifer map viewer at http://www.tceq.texas.gov/compliance/field_ops/eapp/mapdisclaimer.html.

Effluent Limitations Guideline (ELG) – Defined in 40 Code of Federal Regulations (CFR) § 122.2 as a regulation published by the Administrator under § 304(b) of the Clean Water Act (CWA) to adopt or revise effluent limitations.

Facility or Activity – For the purpose of this permit, referring to a construction site, the location of construction activity, or a construction support activity that is regulated under this general permit, including all contiguous land and fixtures (for example, ponds and materials stockpiles), structures, or appurtenances used at a construction site or industrial site.

Final Stabilization - A construction site status where any of the following conditions are met:

(a) All soil disturbing activities at the site have been completed and a uniform (that is, evenly distributed, without large bare areas) perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

(b) For individual lots in a residential construction site by either:

(1) the homebuilder completing final stabilization as specified in condition (a) above; or

(2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization. If temporary stabilization is not feasible, then the homebuilder may fulfill this requirement by retaining perimeter controls or BMPs, and informing the homeowner of the need for removal of temporary controls and the establishment of final stabilization. Fulfillment of this requirement must be documented in the homebuilder's stormwater pollution prevention plan (SWP3).

(c) For construction activities on land used for agricultural purposes (such as pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas that are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

(d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:

(1) Temporary erosion control measures (for example, degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and

(2) The temporary erosion control measures are selected, designed, and installed to achieve 70% of the native background vegetative coverage within three years.

Hyperchlorination of Waterlines – Treatment of potable water lines or tanks with chlorine for disinfection purposes, typically following repair or partial replacement of the waterline or tank, and subsequently flushing the contents.

Impaired Water - A surface water body that is identified as impaired on the latest approved CWA §303(d) List or waters with an EPA-approved or established total maximum daily load (TMDL) that are found on the latest EPA approved *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, which lists the category 4 and 5 water bodies.

Indian Country Land – All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (2) all dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (40 CFR §122.2)

Indian Tribe - Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian Reservation (40 CFR §122.2).

Infeasible –Not technologically possible, or not economically practicable and achievable in light of best industry practices. (40 CFR §450.11(b)).

Large Construction Activity - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total

land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.)

Linear Project – Includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

Low Rainfall Erosivity Waiver (LREW) - A written submission to the executive director from an operator of a construction site that is considered as small construction activity under the permit, which qualifies for a waiver from the requirements for small construction activities, only during the period of time when the calculated rainfall erosivity factor is less than five (5).

Minimize - To reduce or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - A separate storm sewer system owned or operated by the United States, a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, that discharges to surface water in the state.

Notice of Change (NOC) – Written notification to the executive director from a discharger authorized under this permit, providing changes to information that was previously provided to the agency in a notice of intent form.

Notice of Intent (NOI) - A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT) - A written submission to the executive director from a discharger authorized under this general permit requesting termination of coverage.

Operator - The person or persons associated with a large or small construction activity that is either a primary or secondary operator as defined below:

Primary Operator – the person or persons associated with construction activity that meets either of the following two criteria:

(a) the person or persons have on-site operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

(b) the person or persons have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a Storm Water Pollution Prevention Plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Secondary Operator – The person or entity, often the property owner, whose operational control is limited to:

(a) the employment of other operators, such as a general contractor, to perform or supervise construction activities; or

(b) the ability to approve or disapprove changes to construction plans and specifications, but who does not have day-to-day on-site operational control over construction activities at the site.

Secondary operators must either prepare their own SWP3 or participate in a shared SWP3 that covers the areas of the construction site, where they have control over the construction plans and specifications.

If there is not a primary operator at the construction site, then the secondary operator is defined as the primary operator and must comply with the requirements for primary operators.

Outfall - For the purpose of this permit, a point source at the point where stormwater runoff associated with construction activity discharges to surface water in the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other water of the U.S. and are used to convey waters of the U.S.

Permittee - An operator authorized under this general permit. The authorization may be gained through submission of a notice of intent, by waiver, or by meeting the requirements for automatic coverage to discharge stormwater runoff and certain non-stormwater discharges from construction activity.

Point Source –Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR §122.2).

Pollutant - Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any surface water in the state. The term "pollutant" does not include tail water or runoff water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland. For the purpose of this permit, the term "pollutant" includes sediment.

Pollution - The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose (Texas Water Code (TWC) §26.001(14)).

Rainfall Erosivity Factor (R factor) - the total annual erosive potential that is due to climatic effects, and is part of the Revised Universal Soil Loss Equation (RUSLE).

Receiving Water - A "Water of the United States" as defined in 40 CFR §122.2 or a surface water in the state into which the regulated stormwater discharges.

Semiarid Areas - areas with an average annual rainfall of 10 to 20 inches.

Separate Storm Sewer System - A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), designed or used for collecting or conveying stormwater; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

Small Construction Activity - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and

less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities).

Steep Slopes – Where a state, Tribe, local government, or industry technical manual (e.g. stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

Stormwater (or Stormwater Runoff) - Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity - Stormwater runoff, as defined above, from a construction activity.

Structural Control (or Practice) - A pollution prevention practice that requires the construction of a device, or the use of a device, to reduce or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: silt fences, earthen dikes, drainage swales, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State - Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Temporary Stabilization - A condition where exposed soils or disturbed areas are provided a protective cover or other structural control to prevent the migration of pollutants. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either permanent stabilization can be achieved or until further construction activities take place.

Thawing Conditions – for the purposes of this permit, thawing conditions are expected based on the historical likelihood of two or more days with daytime temperatures greater than 32°F. This date can be determined by looking at historical weather data.

Note: The estimation of thawing conditions is for planning purposes only. During construction, the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

Total Maximum Daily Load (TMDL) - The total amount of a pollutant that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Turbidity – A condition of water quality characterized by the presence of suspended solids and/or organic material.

Waters of the United States - Waters of the United States or waters of the U.S. means:

(a) all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) all interstate waters, including interstate wetlands;

(c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) which are used or could be used for industrial purposes by industries in interstate commerce;

(d) all impoundments of waters otherwise defined as waters of the United States under this definition;

(e) tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) the territorial sea; and

(g) wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA are not waters of the U.S. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the U.S. (such as disposal area in wetlands) nor resulted from the impoundment of waters of the U.S. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.

Part II. Permit Applicability and Coverage

Section A. Discharges Eligible for Authorization

1. Stormwater Associated with Construction Activity

Discharges of stormwater runoff and certain non-stormwater discharges from small and large construction activities may be authorized under this general permit.

2. Discharges of Stormwater Associated with Construction Support Activities

Discharges of stormwater runoff and certain non-stormwater discharges from construction support activities as defined in Part I.B of this general permit may be authorized, provided that the following conditions are met:

(a) the construction support activities are located within one (1) mile from the boundary of the construction site where the construction activity authorized under the permit is being conducted that requires the support of these activities;

(b) an SWP3 is developed for the permitted construction site according to the provisions in Part III.F of this general permit, and includes appropriate controls and measures to reduce erosion and the discharge of pollutants in stormwater runoff according to the provisions in Part III.G of this general permit;

(c) the activities are directly related to the construction site;

(d) the activities are not a commercial operation, nor serve other unrelated construction projects; and

(e) the activities do not continue to operate beyond the completion of the construction activity at the project it supports.

Construction support activities that operate outside the terms provided in (a) through (e) above must obtain authorization under a separate Texas Pollutant Discharge Elimination System (TPDES) permit, which may include the TPDES Multi Sector General Permit (MSGP), TXR050000 (related to stormwater discharges associated with industrial activity), an alternative general permit (if available), or an individual water quality permit.

3. Non-Stormwater Discharges

The following non-stormwater discharges from sites authorized under this general permit are also eligible for authorization under this general permit:

(a) discharges from fire-fighting activities (fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, or similar activities);

(b) uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);

(c) water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where detergents and soaps are not used, where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;

(d) uncontaminated water used to control dust;

(e) potable water sources, including waterline flushings, but excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life;

(f) uncontaminated air conditioning condensate;

(g) uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and

(h) lawn watering and similar irrigation drainage.

4. Other Permitted Discharges

Any discharge authorized under a separate National Pollutant Discharge Elimination System (NPDES), TPDES, or TCEQ permit may be combined with discharges authorized by this general permit, provided those discharges comply with the associated permit.

Section B. Concrete Truck Wash Out

The wash out of concrete trucks at regulated construction sites must be performed in accordance with the requirements of Part V of this general permit.

Section C. Limitations on Permit Coverage

1. Post Construction Discharges

Discharges that occur after construction activities have been completed, and after the construction site and any supporting activity site have undergone final stabilization, are not eligible for coverage under this general permit. Discharges originating from the sites are not authorized under this general permit following the submission of the notice of termination (NOT) or removal of the appropriate site notice, as applicable, for the regulated construction activity.

2. Prohibition of Non-Stormwater Discharges

Except as otherwise provided in Part II.A of this general permit, only discharges that are composed entirely of stormwater associated with construction activity may be authorized under this general permit.

3. Compliance with Water Quality Standards

Discharges to surface water in the state that would cause, have the reasonable potential to cause, or contribute to a violation of water quality standards or that would fail to protect and maintain existing designated uses of surface water in the state are not eligible for coverage under this general permit. The executive director may require an application for an individual permit or alternative general permit (see Parts II.H.2 and 3.) to authorize discharges to surface water in the state if the executive director determines that any activity will cause, has the reasonable potential to cause, or contribute to a violation of water quality standards or is found to cause, has the reasonable potential to cause, or contribute to, the impairment of a designated use. The executive director may also require an application for an individual permit considering factors described in Part II.H.3 of this general permit.

4. Impaired Receiving Waters and Total Maximum Daily Load (TMDL) Requirements

The permittee shall determine whether the authorized discharge is to an impaired water body on the latest EPA-approved CWA Section 303(d) List or waters with an EPA-approved or established TMDL that are found on the latest EPA-approved *Texas*

Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d), which lists the category 4 and 5 water bodies.

New sources or new discharges of the pollutants of concern to impaired waters are not authorized by this permit unless otherwise allowable under 30 TAC Chapter 305 and applicable state law. Impaired waters are those that do not meet applicable water quality standard(s) and are listed as category 4 or 5 in the current version of the *Texas Integrated Report of Surface Water Quality*, and waterbodies listed on the CWA § 303(d) list. Pollutants of concern are those for which the water body is listed as impaired.

Discharges of the pollutants of concern to impaired water bodies for which there is a TMDL are not eligible for coverage under this general permit unless they are consistent with the approved TMDL. Permittees must incorporate the conditions and requirements applicable to their discharges into their SWP3, in order to be eligible for coverage under this general permit. For consistency with the construction stormwater-related items in an approved TMDL, the SWP3 must be consistent with any applicable condition, goal, or requirement in the TMDL, TMDL Implementation Plan (I-Plan), or as otherwise directed by the executive director.

5. Discharges to the Edwards Aquifer Recharge or Contributing Zone

Discharges cannot be authorized by this general permit where prohibited by 30 TAC Chapter 213 (relating to Edwards Aquifer). In addition, commencement of construction (i.e., the initial disturbance of soils associated with clearing, grading, or excavating activities, as well as other construction-related activities such as stockpiling of fill material and demolition) at a site regulated under 30 TAC Chapter 213, may not begin until the appropriate Edwards Aquifer Protection Plan (EAPP) has been approved by the TCEQ's Edwards Aquifer Protection Program.

(a) For new discharges located within the Edwards Aquifer Recharge Zone, or within that area upstream from the recharge zone and defined as the Contributing Zone (CZ), operators must meet all applicable requirements of, and operate according to, 30 TAC Chapter 213 (Edwards Aquifer Rule) in addition to the provisions and requirements of this general permit.

(b) For existing discharges located within the Edwards Aquifer Recharge Zone, the requirements of the agency-approved Water Pollution Abatement Plan (WPAP) under the Edwards Aquifer Rule is in addition to the requirements of this general permit. BMPs and maintenance schedules for structural stormwater controls, for example, may be required as a provision of the rule. All applicable requirements of the Edwards Aquifer Rule for reductions of suspended solids in stormwater runoff are in addition to the requirements in this general permit for this pollutant.

(c) For discharges located within ten stream miles upstream of the Edwards Aquifer recharge zone, applicants shall also submit a copy of the NOI to the appropriate TCEQ regional office.

Counties: **Comal, Bexar, Medina, Uvalde, and Kinney**

Contact: TCEQ Water Program Manager
San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
(210) 490-3096

Counties: **Williamson, Travis, and Hays**

Contact: TCEQ Water Program Manager
Austin Regional Office
12100 Park 35 Circle

Room 179, Building A
Austin, Texas 78753
(512) 339-2929

6. Discharges to Specific Watersheds and Water Quality Areas

Discharges otherwise eligible for coverage cannot be authorized by this general permit where prohibited by 30 TAC Chapter 311 (relating to Watershed Protection) for water quality areas and watersheds.

7. Protection of Streams and Watersheds by Other Governmental Entities

This general permit does not limit the authority or ability of federal, other state, or local governmental entities from placing additional or more stringent requirements on construction activities or discharges from construction activities. For example, this permit does not limit the authority of a home-rule municipality provided by Texas Local Government Code §401.002.

8. Indian Country Lands

Stormwater runoff from construction activities occurring on Indian Country lands are not under the authority of the TCEQ and are not eligible for coverage under this general permit. If discharges of stormwater require authorization under federal NPDES regulations, authority for these discharges must be obtained from the U.S. Environmental Protection Agency (EPA).

9. Oil and Gas Production and Transportation

Stormwater runoff from construction activities associated with the exploration, development, or production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline, are not under the authority of the TCEQ and are not eligible for coverage under this general permit. Authorization for stormwater discharges from construction activities that are associated with production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline must be obtained, as required, from the U.S. EPA or the Texas Railroad Commission, as applicable. Discharge of stormwater related to construction activity, from a facility that stores both refined products intended for off-site use and crude oil in aboveground storage tanks, is regulated by the TCEQ and is eligible for coverage under this general permit.

10. Stormwater Discharges from Agricultural Activities

Stormwater discharges from agricultural activities that are not point source discharges of stormwater are not subject to TPDES permit requirements. These activities may include clearing and cultivating ground for crops, construction of fences to contain livestock, construction of stock ponds, and other similar agricultural activities. Discharges of stormwater runoff associated with the construction of facilities that are subject to TPDES regulations, such as the construction of concentrated animal feeding operations, would be point sources regulated under this general permit.

11. Endangered Species Act

Discharges that would adversely affect a listed endangered or threatened aquatic or aquatic-dependent species or its critical habitat are not authorized by this permit, unless the requirements of the Endangered Species Act are satisfied. Federal requirements related to endangered species apply to all TPDES permitted discharges and site-specific controls may be required to ensure that protection of endangered or threatened species is achieved. If a permittee has concerns over potential impacts to listed species, the permittee may contact TCEQ for additional information.

12. Other

Nothing in Part II of the general permit is intended to negate any person's ability to assert *force majeure* (act of God, war, strike, riot, or other catastrophe) defenses found in 30 TAC §70.7.

Section D. Deadlines for Obtaining Authorization to Discharge

1. Large Construction Activities

(a) New Construction - Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

(b) Ongoing Construction - Operators of large construction activities continuing to operate after the effective date of this permit, and authorized under the TPDES Construction General Permit TXR150000 (effective on March 5, 2013), must submit an NOI to renew authorization or a NOT to terminate coverage under this general permit within 90 days of the effective date of this general permit. During this interim or grace period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the 2013 TPDES general permit.

2. Small Construction Activities

(a) New Construction - Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

(b) Ongoing Construction - Discharges from ongoing small construction activities that commenced prior to the effective date of this general permit, and that do not meet the conditions to qualify for termination of this permit as described in Part II.F of this general permit, must meet the requirements to be authorized, either under this general permit or a separate TPDES permit, within 90 days of the effective date of this general permit. During this interim period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the 2013 TPDES Construction General Permit.

Section E. Obtaining Authorization to Discharge

1. Automatic Authorization for Small Construction Activities with Low Potential for Erosion:

Operators of small construction activity, as defined in Part I.B of this general permit, shall not submit an NOI for coverage, unless otherwise required by the executive director.

Operators of small construction activities, which occur in certain counties and during periods of low potential for erosion that do not meet the conditions of the waiver described in Part II.G of this general permit, may be automatically authorized under this general permit if all the following conditions are met.

(a) the construction activity occurs in a county and during the corresponding date range(s) listed in Appendix A;

(b) the construction activity is initiated and completed, including either final or temporary stabilization of all disturbed areas, within the time frame identified in Appendix A for the location of the construction site;

(c) all temporary stabilization is adequately maintained to effectively reduce or prohibit erosion, permanent stabilization activities have been initiated, and a condition of final stabilization is completed no later than 30 days following the end date of the time frame identified in Appendix A for the location of the construction site;

(d) the permittee signs a completed TCEQ small construction site notice for low potential for erosion, including the certification statement;

(e) a signed and certified copy of the small construction site notice for low potential for erosion is posted at the construction site in a location where it is readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and maintained in that location until completion of the construction activity;

NOTE: Posted site notices may have a redacted signature as long as there is an original signed and certified site notice, with a viewable signature, located on-site and available for review by any applicable regulatory authority.

(f) a copy of the signed and certified small construction site notice for low potential for erosion is provided to the operator of any MS4 receiving the discharge at least two days prior to commencement of construction activities;

(g) discharges of stormwater runoff or other non-stormwater discharges from any supporting concrete batch plant or asphalt batch plant is separately authorized under an individual TPDES permit, another TPDES general permit, or under an individual TCEQ permit where stormwater and non-stormwater is disposed of by evaporation or irrigation (discharges are adjacent to water in the state); and

(h) any non-stormwater discharges are either authorized under a separate permit or authorization, are not considered by TCEQ to be a wastewater, or are captured and routed for disposal at a publicly operated treatment works or licensed waste disposal facility.

If all of the conditions in (a) – (h) above are met, then the operator(s) of small construction activities with low potential for erosion are not required to develop a SWP3.

If an operator is conducting small construction activities and any of the above conditions (a) – (h) are not met, the operator cannot declare coverage under the automatic authorization for small construction activities with low potential for erosion and must meet the requirements for automatic authorization (all other) small construction activities, described below in Part II.E.2.

For small construction activities that occur during a period with a low potential for erosion, where automatic authorization under this section is not available, an operator may apply for and obtain a waiver from permitting (Low Rainfall Erosivity Waiver – LREW), as described in Part II.G of this general permit. Waivers from coverage under the LREW do not allow for any discharges of non-stormwater and the operator must ensure that discharges on non-stormwater are either authorized under a separate permit or authorization.

2. Automatic Authorization for Small Construction Activities:

Operators of small construction activities as defined in Part I.B of this general permit shall not submit an NOI for coverage, unless otherwise required by the executive director.

Operators of small construction activities, as defined in Part I.B of this general permit or as defined but who do not meet in the conditions and requirements located in Part II.E.1 above, may be automatically authorized for small construction activities, provided that they meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit, that covers either the entire site or all portions of the site for which the applicant is the operator, and implement the SWP3 prior to commencing construction activities;

(b) all operators of regulated small construction activities must post a copy of a signed and certified Small Construction site notice, the notice must be posted at the construction site in a location where it is safely and readily available for viewing by the general public, local, state, and federal authorities, at least two days prior to commencing construction activity , and maintain the notice in that location until completion of the construction activity (for linear construction activities, e.g. pipeline or highway, the site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public; local, state, and federal authorities);

(c) operators must maintain a posted site notice at the construction site until final stabilization has been achieved; and

NOTE: Posted site notices may have a redacted signature as long as there is an original signed and certified Small Construction site notice, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

(d) provide a copy of the signed and certified construction site notice to the operator of any municipal separate storm sewer system (MS4) receiving the discharge at least two days prior to commencement of construction activities.

As described in Part I.B of this general permit, large construction activities include those that will disturb less than five (5) acres of land, but that are part of a larger common plan of development or sale that will ultimately disturb five (5) or more acres of land, and must meet the requirements of Part II.E.3. below.

3. Authorization for Large Construction Activities:

Operators of large construction activities that qualify for coverage under this general permit must meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit that covers either the entire site or all portions of the site where the applicant is the operator. The SWP3 must be developed and implemented prior to obtaining coverage and prior to commencing construction activities;

(b) primary operators of large construction activities must submit an NOI prior to commencing construction activity at a construction site. A completed NOI must be submitted to TCEQ electronically using the online e-Permits system on TCEQ's website. Operators with an electronic reporting waiver must submit a completed NOI to TCEQ at least seven (7) days prior to prior to commencing construction activity to obtain provisional coverage seven (7) days from the postmark date for delivery to the TCEQ. An authorization is no longer provisional when the executive director finds the NOI is administratively complete and an authorization number is issued to the permittee for the construction site indicated on the NOI.

If an additional primary operator is added after the initial NOI is submitted, the additional primary operator must meet the same requirements for existing primary operator(s), as indicated above.

If the primary operator changes due to responsibility at the site being transferred from one primary operator to another after the initial NOI is submitted, the new primary operator must submit a paper NOI or an electronic NOI at least ten (10)

days prior to assuming operational control of a construction site and commencing construction activity.

Operators that submit NOIs electronically must use the online e-Permits system available through the TCEQ website.

(c) all operators of large construction activities must post a site notice in accordance with Part III.D.2 of this permit. The site notice must be located where it is safely and readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and must be maintained in that location until completion of the construction activity (for linear construction activities, e.g. pipeline or highway, the site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public, local, state, and federal authorities);

(d) two days prior to commencing construction activities, all primary operators must:

i. provide a copy of the signed NOI to the operator of any MS4 receiving the discharge and to any secondary construction operator, and

ii. list in the SWP3 the names and addresses of all MS4 operators receiving a copy;

(e) all persons meeting the definition of "secondary operator" in Part I of this permit are hereby notified that they are regulated under this general permit, but are not required to submit an NOI, provided that a primary operator at the site has submitted an NOI, or prior to commencement of construction activities, a primary operator is required to submit an NOI and the secondary operator has provided notification to the operator(s) of the need to obtain coverage (with records of notification available upon request). Any secondary operator notified under this provision may alternatively submit an NOI under this general permit, may seek coverage under an alternative TPDES individual permit, or may seek coverage under an alternative TPDES general permit if available; and

(f) all secondary operators of large construction activities must post a copy of the signed and certified Secondary Operator construction site notice and provide a copy of the signed and certified site notice to the operator of any MS4 receiving the discharge at least two days prior to the commencement construction activities.

NOTE: Posted site notices may have a redacted signature as long as there is an original signed and certified Secondary Operator construction site notice, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

Effective September 1, 2018, applicants must submit an NOI using the online e-Permits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Waivers for Small Construction Activities:

Operators of certain small construction activities may obtain a waiver from coverage under this general permit, if applicable. The requirements are outlined in Part II.G below.

5. Effective Date of Coverage

(a) Operators of small construction activities as described in either Part II.E.1 or II.E.2 above are authorized immediately following compliance with the applicable conditions of Part II.E.1 or II.E.2. Secondary operators of large construction

activities as described in Part II.E.3 above are authorized immediately following compliance with the applicable conditions in Part II.E.3. For activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(b) Primary operators of large construction activities as described in Part II.E.3 above that electronically submit an NOI are authorized immediately following confirmation of receipt of the electronic form by the TCEQ, unless otherwise notified by the executive director. Operators with an electronic reporting waiver are provisionally authorized seven (7) days from the date that a completed paper NOI is postmarked for delivery to the TCEQ, unless otherwise notified by the executive director. An authorization is no longer provisional when the executive director finds the NOI is administratively complete and an authorization number is issued to the permittee for the construction site indicated on the NOI.

For construction activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction activities may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(c) Operators are not prohibited from submitting late NOIs or posting late notices to obtain authorization under this general permit. The TCEQ reserves the right to take appropriate enforcement action for any unpermitted activities that may have occurred between the time construction commenced and authorization was obtained.

(d) If operators that submitted NOIs have active authorizations for construction activities that are ongoing when the term of the current general permit expires and a new general permit is issued, a 90-day interim (grace) period is granted to provide coverage that is administratively continued until operators with active authorizations can obtain coverage under the newly issued CGP. The 90-day grace period starts on the effective date of the newly issued CGP. Deadlines for obtaining coverage for operators of small and large construction are provided in Part II.D.1 and 2 above.

6. Notice of Change (NOC)

If relevant information provided in the NOI changes, the operator that has submitted the NOI must submit an NOC to TCEQ at least fourteen (14) days before the change occurs, if possible. Where a 14-day advance notice is not possible, the operator must submit an NOC to TCEQ within 14-days of discovery of the change. If the operator becomes aware that it failed to submit any relevant facts or submitted incorrect information in an NOI, the correct information must be submitted to TCEQ in an NOC within 14 days after discovery. The NOC shall be submitted on a form provided by the executive director, or by letter if an NOC form is not available. A copy of the NOC form or letter must also be placed in the SWP3 and provided to the operator of any MS4 receiving the discharge. A list that includes the names and addresses of all MS4 operators receiving a copy of the NOC (or NOC letter) must be included in the SWP3.

Information on an NOC may include, but is not limited to, the following: a change in the description of the construction project; an increase in the number of acres disturbed (for increases of one or more acres); or the name of the operator (where the name of the operator has changed).

A transfer of operational control from one operator to another, including a transfer of the ownership of a company. Coverage under this general permit is not transferable

from one operator to another or one company to another, and may not be included in an NOC.

A transfer of ownership of a company may include, but is not limited to, the following: changes to the structure of a company, such as changing from a partnership to a corporation or changing corporation types, so that the filing number (or charter number) that is on record with the Texas Secretary of State must be changed.

An NOC is not required for notifying TCEQ of a decrease in the number of acres disturbed. This information must be included in the SWP3 and retained on site.

Effective September 1, 2018, applicants must submit an NOC using the online e-Permits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

7. Signatory Requirement for NOI Forms, Notice of Termination (NOT) Forms, NOC Letters, and Construction Site Notices

NOI forms, NOT forms, NOC letters, and Construction Site Notices that require a signature must be signed according to 30 TAC § 305.44 (relating to Signatories for Applications).

8. Contents of the NOI

The NOI form shall require, at a minimum, the following information:

(a) the TPDES CGP authorization number for existing authorizations under this general permit, where the operator submits an NOI to renew coverage within 90 days of the effective date of this general permit;

(b) the name, address, and telephone number of the operator filing the NOI for permit coverage;

(c) the name (or other identifier), address, county, and latitude/longitude of the construction project or site;

(d) the number of acres that will be disturbed by the applicant;

(e) confirmation that the project or site will not be located on Indian Country lands;

(f) confirmation that a SWP3 has been developed in accordance with this general permit, that it will be implemented prior to commencement of construction activities, and that it is compliant with any applicable local sediment and erosion control plans; for multiple operators who prepare a shared SWP3, the confirmation for an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator;

(g) name of the receiving water(s);

(h) the classified segment number for each classified segment that receives discharges from the regulated construction activity (if the discharge is not directly to a classified segment, then the classified segment number of the first classified segment that those discharges reach); and

(i) the name of all surface waters receiving discharges from the regulated construction activity that are on the latest EPA-approved CWA § 303(d) List of impaired waters or Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d) as not meeting applicable state water quality standards.

Section F. Terminating Coverage

1. Notice of Termination (NOT) Required

Each operator that has submitted an NOI for authorization of large construction activities under this general permit must apply to terminate that authorization following the conditions described in this section of the general permit.

Authorization of large construction must be terminated by submitting an NOT on a paper form to TCEQ supplied by the executive director or electronically via the online e-Permits system available through the TCEQ website. Authorization to discharge under this general permit terminates at midnight on the day a paper NOT is postmarked for delivery to the TCEQ or immediately following confirmation of the receipt of the NOT submitted electronically by the TCEQ. Compliance with the conditions and requirements of this permit is required until an NOT is submitted.

Effective September 1, 2018, applicants must submit an NOT using the online e-Permits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

The NOT must be submitted to TCEQ, and a copy of the NOT provided to the operator of any MS4 receiving the discharge (with a list in the SWP3 of the names and addresses of all MS4 operators receiving a copy), within 30 days after any of the following conditions are met:

(a) final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

(b) a transfer of operational control has occurred (See Section II.F.4 below); or

(c) the operator has obtained alternative authorization under an individual TPDES permit or alternative TPDES general permit.

2. Minimum Contents of the NOT

The NOT form shall require, at a minimum, the following information:

(a) if authorization for construction activity was granted following submission of an NOI, the permittee's site-specific TPDES authorization number for a specific construction site;

(b) an indication of whether final stabilization has been achieved at the site and a NOT has been submitted or if the permittee is simply no longer an operator at the site;

(c) the name, address, and telephone number of the permittee submitting the NOT;

(d) the name (or other identifier), address, county, and location (latitude/longitude) of the construction project or site; and

(e) a signed certification that either all stormwater discharges requiring authorization under this general permit will no longer occur, or that the applicant is no longer the operator of the facility or construction site, and that all temporary structural erosion controls have either been removed, will be removed on a schedule defined in the SWP3, or have been transferred to a new operator if the new operator has applied for permit coverage. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.

3. Termination of Coverage for Small Construction Sites and for Secondary Operators at Large Construction Sites

(a) Each operator that has obtained automatic authorization for small construction or is a secondary operator for large construction must perform the following when terminating coverage under the permit:

i. remove the site notice;

ii. complete the applicable portion of the site notice related to removal of the site notice; and

iii. submit a copy of the completed site notice to the operator of any MS4 receiving the discharge (or provide alternative notification as allowed by the MS4 operator, with documentation of such notification included in the SWP3).

(b) The activities described in Part II.F.3.(a) above must be completed by the operator within 30 days of meeting any of the following conditions:

i. final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

ii. a transfer of day-to-day operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions has occurred (See Section II.F.4. below); or

iii. the operator has obtained alternative authorization under an individual or general TPDES permit.

Authorization to discharge under this general permit terminates immediately upon removal of the applicable site notice. Compliance with the conditions and requirements of this permit is required until the site notice is removed.

4. Transfer of Day-to-Day Operational Control

(a) When the primary operator of a large construction activity changes or operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions is transferred to another primary operator, the original operator must do the following:

i. submit an NOT within ten (10) days prior to the date that responsibility for operations terminates, and the new operator must submit an NOI at least ten (10) days prior to the transfer of operational control, in accordance with condition (c) below; and

ii. submit a copy of the NOT from the primary operator terminating its coverage under the permit and its operational control of the construction site and submit a copy of the NOI from the new primary operator to the operator of any MS4 receiving the discharge in accordance with Part II.F.1 above.

(b) For transfer of operational control, operators of small construction activities and secondary operators of large construction activities who are not required to submit an NOI must do the following:

i. the existing operator must remove the original site notice, and the new operator must post the required site notice prior to the transfer of operational control, in accordance with the conditions in Part II.F.4.(c) i or ii below; and

ii. a copy of the site notice, which must be completed and provided to the operator of any MS4 receiving the discharge, in accordance with Part II.F.3 above.

(c) Each operator is responsible for determining its role as an operator as defined in Part I.B and obtaining authorization under the permit, as described above in Part

II.E. 1 – 3. Where authorization has been obtained by submitting an NOI for coverage under this general permit, permit coverage is not transferable from one operator to another. A transfer of operational control can include changes to the structure of a company, such as changing from a partnership to a corporation, or changing to a different corporation type such that a different filing (or charter) number is established with the Texas Secretary of State. A transfer of operational control can also occur when of the following criteria is met, as applicable:

i. Another operator has assumed control over all areas of the site that do not meet the definition for final stabilization;

ii. all silt fences and other temporary erosion controls have either been removed, scheduled for removal as defined in the SWP3, or transferred to a new operator, provided that the original permitted operator has attempted to notify the new operator in writing of the requirement to obtain permit coverage. Records of this notification (or attempt at notification) shall be retained by the operator transferring operational control to another operator in accordance with Part VI of this permit. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal; or

iii. a homebuilder has purchased one or more lots from an operator who obtained coverage under this general permit for a common plan of development or sale. The homebuilder is considered a new operator and shall comply with the requirements of this permit. Under these circumstances, the homebuilder is only responsible for compliance with the general permit requirements as they apply to the lot(s) it has operational control over in a larger common plan of development, and the original operator remains responsible for common controls or discharges, and must amend its SWP3 to remove the lot(s) transferred to the homebuilder.

Section G. Waivers from Coverage

The executive director may waive the otherwise applicable requirements of this general permit for stormwater discharges from small construction activities under the terms and conditions described in this section.

1. Waiver Applicability and Coverage

Operators of small construction activities may apply for and receive a waiver from the requirements to obtain authorization under this general permit, when the calculated rainfall erosivity (R) factor for the entire period of the construction project is less than five (5).

The operator must submit either a signed paper Low Rainfall Erosivity Waiver (LREW) certification form to the TCEQ, supplied by the executive director, or complete the form electronically via the online e-Permits system available through the TCEQ website. The form is a certification by the operator that the small construction activity will commence and be completed within a period when the value of the calculated R factor is less than five (5).

The paper LREW certification form must be postmarked for delivery to the TCEQ at least seven (7) days before construction activity begins or, if submitted electronically, construction may begin at any time following the receipt of written confirmation from TCEQ that a complete electronic application was submitted and acknowledged.

This waiver from coverage does not apply to any non-stormwater discharges, including what is allowed under this permit. The operator must insure that all non-stormwater discharges are either authorized under a separate permit or authorization, or are captured and routed to an authorized treatment facility for disposal.

Effective September 1, 2018, applicants must submit an LREW using the online e-Permits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

2. Steps to Obtaining a Waiver

The construction site operator may calculate the R factor to request a waiver using the following steps:

(a) Estimate the construction start date and the construction end date. The construction end date is the date that final stabilization will be achieved.

(b) Find the appropriate Erosivity Index (EI) zone in Appendix B of this permit.

(c) Find the EI percentage for the project period by adding the results for each period of the project using the table provided in Appendix D of this permit, in EPA Fact Sheet 2.1, or in USDA Handbook 703, by subtracting the start value from the end value to find the percent EI for the site.

(d) Refer to the Isoerodent Map (Appendix C of this permit) and interpolate the annual isoerodent value for the proposed construction location.

(e) Multiply the percent value obtained in Step (c) above by the annual isoerodent value obtained in Step (d). This is the R factor for the proposed project. If the value is less than 5, then a waiver may be obtained. If the value is five (5) or more, then a waiver may not be obtained, and the operator must obtain coverage under Part II.E.2. of this permit.

Alternatively, the operator may calculate a site-specific R factor utilizing the following online calculator: http://ei.tamu.edu/index.html, or using another available resource.

A copy of the LREW certification form is not required to be posted at the small construction site.

3. Effective Date of a LREW

Unless otherwise notified by the executive director, operators of small construction activities seeking coverage under a LREW are provisionally waived from the otherwise applicable requirements of this general permit seven (7) days from the date that a completed paper LREW certification form is postmarked for delivery to TCEQ, or immediately upon receiving confirmation of approval of an electronic submittal, made via the online e-Permits system available through the TCEQ website.

Effective September 1, 2018, applicants seeking coverage under a LREW must submit an application for a LREW using the online e-Permits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Activities Extending Beyond the LREW Period

If a construction activity extends beyond the approved waiver period due to circumstances beyond the control of the operator, the operator must either:

(a) recalculate the R factor using the original start date and a new projected ending date, and if the R factor is still under five (5), submit a new waiver certification form at least two (2) days before the end of the original waiver period; or

(b) obtain authorization under this general permit according to the requirements for automatic authorization for small construction activities in Part II.E.2 of this permit, prior to the end of the approved LREW period.

Section H. Alternative TPDES Permit Coverage

1. Individual Permit Alternative

Any discharge eligible for coverage under this general permit may alternatively be authorized under an individual TPDES permit according to 30 TAC §305 (relating to Consolidated Permits). Applications for individual permit coverage must be submitted at least three hundred and thirty (330) days prior to commencement of construction activities to ensure timely authorization. Existing coverage under this general permit should not be terminated until an individual permit is issued and in effect.

2. Alternative Authorizations for Certain Discharges

Certain discharges eligible for authorization under this general permit may alternatively be authorized under a separate general permit according to 30 TAC Chapter 205 (relating to General Permits for Waste Discharges), as applicable.

3. Individual Permit Required

The executive director may require an operator of a construction site, otherwise eligible for authorization under this general permit, to apply for an individual TPDES permit in the following circumstances:

(a) the conditions of an approved TMDL or TMDL I-Plan on the receiving water;

(b) the activity being determined to cause, has a reasonable potential to cause, or contribute to a violation of water quality standards or being found to cause, or contribute to, the loss of a designated use of surface water in the state: and

(c) any other consideration defined in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges) including 30 TAC Chapter 205.4(c)(3)(D), which allows the commission to deny authorization under the general permit and require an individual permit if a discharger has been determined by the executive director to have been out of compliance with any rule, order, or permit of the commission, including non-payment of fees assessed by the executive director.

A discharger with a TCEQ compliance history rating of "unsatisfactory" is ineligible for coverage under this general permit. In that case, 30 TAC § 60.3 requires the executive director to deny or suspend an authorization to discharge under a general permit. However, per TWC § 26.040(h), a discharger is entitled to a hearing before the commission prior to having an authorization denied or suspended for having an "unsatisfactory" compliance history.

Denial of authorization to discharge under this general permit or suspension of a permittee's authorization under this general permit for reasons other than compliance history shall be done according to commission rules in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges).

4. Alternative Discharge Authorization

Any discharge eligible for authorization under this general permit may alternatively be authorized under a separate general permit according to 30 TAC Chapter 205 (relating to General Permits for Waste Discharges), if applicable.

Section I. Permit Expiration

1. This general permit is effective for a term not to exceed five (5) years. All active discharge authorizations expire on the date provided on page one (1) of this permit. Following public notice and comment, as provided by 30 TAC §205.3 (relating to Public Notice, Public Meetings, and Public Comment), the commission may amend,

revoke, cancel, or renew this general permit. All authorizations that are active at the time the permit term expires will be administratively continued as indicated in Part II.I.2 below and in Part II.D.1(b) and D.2(b) of this permit.

2. If the executive director publishes a notice of the intent to renew or amend this general permit before the expiration date, the permit will remain in effect for existing, authorized discharges until the commission takes final action on the permit. Upon issuance of a renewed or amended permit, permittees may be required to submit an NOI within 90 days following the effective date of the renewed or amended permit, unless that permit provides for an alternative method for obtaining authorization.
3. If the commission does not propose to reissue this general permit within 90 days before the expiration date, permittees shall apply for authorization under an individual permit or an alternative general permit. If the application for an individual permit is submitted before the expiration date, authorization under this expiring general permit remains in effect until the issuance or denial of an individual permit. No new NOIs will be accepted nor new authorizations honored under the general permit after the expiration date.

Part III. Stormwater Pollution Prevention Plans (SWP3)

All regulated construction site operators shall prepare an SWP3, prior to submittal of an NOI, to address discharges authorized under Parts II.E.2 and II.E.3 of this general permit that will reach Waters of the U.S. This includes discharges to MS4s and privately owned separate storm sewer systems that drain into surface water in the state or Waters of the U.S.

Individual operators at a site may develop separate SWP3s that cover only their portion of the project, provided reference is made to the other operators at the site. Where there is more than one SWP3 for a site, operators must coordinate to ensure that BMPs and controls are consistent and do not negate or impair the effectiveness of each other. Regardless of whether a single comprehensive SWP3 is developed or separate SWP3s are developed for each operator, it is the responsibility of each operator to ensure compliance with the terms and conditions of this general permit in the areas of the construction site where that operator has control over construction plans and specifications or day-to-day operations.

An SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater associated with construction activity and non-stormwater discharges described in Part II.A.3, in compliance with the terms and conditions of this permit.

An SWP3 must also identify any potential sources of pollution that have been determined to cause, have a reasonable potential to cause, or contribute to a violation of water quality standards or have been found to cause or contribute to the loss of a designated use of surface water in the state from discharges of stormwater from construction activities and construction support activities. Where potential sources of these pollutants are present at a construction site, the SWP3 must also contain a description of the management practices that will be used to prevent these pollutants from being discharged into surface water in the state or Waters of the U.S.

> NOTE: Construction support activities can also include vehicle repair areas, fueling areas, etc. that are present at a construction site solely for the support construction activities and are only used by operators at the construction site.

The SWP3 is intended to serve as a road map for how the construction operator will comply with the effluent limits and other conditions of this permit and does not establish the effluent limits that apply to the construction site's discharges. These limits are established in Part III.G of the permit.

Section A. Shared SWP3 Development

For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site is encouraged. Operators of small and large construction activities must independently obtain authorization under this permit, but may work together with other regulated operators at the construction site to prepare and implement a single, comprehensive SWP3, which can be shared by some or all operators, for the construction activities that each of the operators are performing at the entire construction site.

1. The SWP3 must include the following:
   (a) for small construction activities – the name of each operator that participates in the shared SWP3;
   (b) for large construction activities - the name of each operator that participates in the shared SWP3, the general permit authorization numbers of each operator (or the date that the NOI was submitted to TCEQ by each operator that has not received an authorization number for coverage under this permit); and
   (c) for large and small construction activities - the signature of each operator participating in the shared SWP3.
2. The SWP3 must clearly indicate which operator is responsible for satisfying each shared requirement of the SWP3. If the responsibility for satisfying a requirement is not described in the plan, then each permittee is entirely responsible for meeting the requirement within the boundaries of the construction site where they perform construction activities. The SWP3 must clearly describe responsibilities for meeting each requirement in shared or common areas.
3. The SWP3 may provide that one operator is responsible for preparation of a SWP3 in compliance with the CGP, and another operator is responsible for implementation of the SWP3 at the project site.

Section B. Responsibilities of Operators

1. Secondary Operators and Primary Operators with Control Over Construction Plans and Specifications

   All secondary operators and primary operators with control over construction plans and specifications shall:

   (a) ensure the project specifications allow or provide that adequate BMPs are developed to meet the requirements of Part III of this general permit;
   (b) ensure that the SWP3 indicates the areas of the project where they have control over project specifications, including the ability to make modifications in specifications;
   (c) ensure that all other operators affected by modifications in project specifications are notified in a timely manner so that those operators may modify their BMP s as necessary to remain compliant with the conditions of this general permit; and
   (d) ensure that the SWP3 for portions of the project where they are operators indicates the name and site-specific TPDES authorization number(s) for operators with the day-to-day operational control over those activities necessary to ensure compliance with the SWP3 and other permit conditions. If a primary operator has not been authorized or has abandoned the site, the secondary operator is considered to be the responsible party and must obtain authorization

as a primary operator under the permit, until the authority for day-to-day operational control is transferred to another primary operator. The new primary operator must update or develop a new SWP3 that will reflect the transfer of operational control and include any additional updates to the SWP3 to meet requirements of the permit.

2. Primary Operators with Day-to-Day Operational Control

Primary operators with day-to-day operational control of those activities at a project that are necessary to ensure compliance with an SWP3 and other permit conditions must ensure that the SWP3 accomplishes the following requirements:

(a) meets the requirements of this general permit for those portions of the project where they are operators;

(b) identifies the parties responsible for implementation of BMPs described in the SWP3;

(c) indicates areas of the project where they have operational control over day-to-day activities; and

(d) the name and site-specific TPDES authorization number of the parties with control over project specifications, including the ability to make modifications in specifications for areas where they have operational control over day-to-day activities.

Section C. Deadlines for SWP3 Preparation, Implementation, and Compliance

The SWP3 must be prepared prior to obtaining authorization under this general permit, and implemented prior to commencing construction activities that result in soil disturbance. The SWP3 must be prepared so that it provides for compliance with the terms and conditions of this general permit.

Section D. Plan Review and Making Plans Available

1. The SWP3 must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWP3. The SWP3 must be made readily available at the time of an on-site inspection to: the executive director; a federal, state, or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; and the operator of a municipal separate storm sewer receiving discharges from the site. If the SWP3 is retained off-site, then it shall be made available as soon as reasonably possible. In most instances, it is reasonable that the SWP3 shall be made available within 24 hours of the request.
2. Operators with authorization for construction activity under this general permit must post a TCEQ site notice at the construction site at a place readily available for viewing by the general public, and local, state, and federal authorities.

(a) Primary and secondary operators of large construction activities must each post a TCEQ construction site notice, respective to their role as an operator at the construction site, as required above and according to requirements in Part II.E.3 of this general permit.

(b) Primary and secondary operators of small construction activities must post the TCEQ site notice as required in Part III.D.2.(a) above and for the specific type of small construction described in Part II.E.1 and 2 of the permit.

(c) If the construction project is a linear construction project, such as a pipeline or highway, the notices must be placed in a publicly accessible location near where construction is actively underway. Site notices for small and large construction

activities at these linear construction sites may be located, as necessary, along the length of the project, but must still be readily available for viewing by the general public; local, state, and federal authorities; and contain the following information:

i. the site-specific TPDES authorization number for the project if assigned;

ii. the operator name, contact name, and contact phone number;

iii. a brief description of the project; and

iv. the location of the SWP3.

3. This permit does not provide the general public with any right to trespass on a construction site for any reason, including inspection of a site; nor does this permit require that permittees allow members of the general public access to a construction site.

Section E. Revisions and Updates to SWP3s

The permittee must revise or update the SWP3 within seven days of when any of the following occurs:

1. a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants and that has not been previously addressed in the SWP3;
2. changing site conditions based on updated plans and specifications, new operators, new areas of responsibility, and changes in BMPs; or
3. results of inspections or investigations by construction site personnel authorized by the permittee, operators of a municipal separate storm sewer system receiving the discharge, authorized TCEQ personnel, or a federal, state or local agency approving sediment and erosion plans indicate the SWP3 is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under this general permit.

Section F. Contents of SWP3

The SWP3 must be developed and implemented by primary operators of small and large construction activities and include, at a minimum, the information described in this section and must comply with the construction and development effluent guidelines in Part III, Section G of the general permit.

1. A site or project description, which includes the following information:
   (a) a description of the nature of the construction activity;
   (b) a list of potential pollutants and their sources;
   (c) a description of the intended schedule or sequence of activities that will disturb soils for major portions of the site, including estimated start dates and duration of activities;
   (d) the total number of acres of the entire property and the total number of acres where construction activities will occur, including areas where construction support activities (defined in Part I.B of this general permit) occur;
   (e) data describing the soil or the quality of any discharge from the site;
   (f) a map showing the general location of the site (e.g. a portion of a city or county map);
   (g) a detailed site map (or maps) indicating the following:

i. drainage patterns and approximate slopes anticipated after major grading activities;

ii. areas where soil disturbance will occur;

iii. locations of all controls and buffers, either planned or in place;

iv. locations where temporary or permanent stabilization practices are expected to be used;

v. locations of construction support activities, including those located off-site;

vi. surface waters (including wetlands) either at, adjacent, or in close proximity to the site, and also indicate whether those waters are impaired;

vii. locations where stormwater discharges from the site directly to a surface water body or a municipal separate storm sewer system;

viii. vehicle wash areas; and

ix. designated points on the site where vehicles will exit onto paved roads (for instance, this applies to construction transition from unstable dirt areas to exterior paved roads).

Where the amount of information required to be included on the map would result in a single map being difficult to read and interpret, the operator shall develop a series of maps that collectively include the required information.

(h) the location and description of support activities authorized under the permittee's NOI, including asphalt plants, concrete plants, and other activities providing support to the construction site that is authorized under this general permit;

(i) the name of receiving waters at or near the site that may be disturbed or that may receive discharges from disturbed areas of the project;

(j) a copy of this TPDES general permit;

(k) the NOI and the acknowledgement of provisional and non-provisional authorization for primary operators of large construction sites, and the site notice for small construction sites and for secondary operators of large construction sites;

(l) stormwater and allowable non-stormwater discharge locations, including storm drain inlets on site and in the immediate vicinity of the construction site where construction support activities will occur; and

(m) locations of all pollutant-generating activities at the construction site and where construction support activities will occur, such as the following: Paving operations; concrete, paint and stucco washout and water disposal; solid waste storage and disposal; and dewatering operations.

2. A description of the BMPs that will be used to minimize pollution in runoff.

The description must identify the general timing or sequence for implementation. At a minimum, the description must include the following components:

(a) General Requirements

i. Erosion and sediment controls must be designed to retain sediment on-site to the extent practicable with consideration for local topography, soil type, and rainfall.

ii. Control measures must be properly selected, installed, and maintained according to the manufacturer's or designer's specifications.

iii. Controls must be developed to minimize the offsite transport of litter, construction debris, and construction materials.

(b) Erosion Control and Stabilization Practices

The SWP3 must include a description of temporary and permanent erosion control and stabilization practices for the construction site, where small or large construction activity will occur. The erosion control and stabilization practices selected by the permittee must be compliant with the requirements for sediment and erosion control, located in Part III.G of this permit. The description of the SWP3 must also include a schedule of when the practices will be implemented. Site plans must ensure that existing vegetation at the construction site is preserved where it is possible.

i. Erosion control and stabilization practices may include but are not limited to: establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.

ii. The following records must be maintained and either attached to or referenced in the SWP3, and made readily available upon request to the parties listed in Part III.D.1 of this general permit:

(A) the dates when major grading activities occur;

(B) the dates when construction activities temporarily or permanently cease on a portion of the site; and

(C) the dates when stabilization measures are initiated.

iii. Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Stabilization measures that provide a protective cover must be initiated immediately in portions of the site where construction activities have permanently ceased. The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased. Except as provided in (A) through (D) below, these measures must be completed as soon as practicable, but no more than 14 calendar days after the initiation of soil stabilization measures:

(A) Where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased due to frozen conditions, non-vegetative controls must be implemented until thawing conditions (as defined in Part I.B of this general permit) are present, and vegetative stabilization measures can be initiated as soon as practicable.

(B) In arid areas, semi-arid areas, or drought-stricken areas, as they are defined in Part I.B of this general permit, where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased or is precluded by arid conditions, other types of erosion control and stabilization measures must be initiated at the site as soon as practicable. Where vegetative controls are infeasible due to arid conditions, and within 14 calendar days of a temporary or permanent cessation of construction activity in any portion of the site, the operator shall immediately install non-

vegetative erosion controls in areas of the construction site where construction activity is complete or has ceased. If non-vegetative controls are infeasible, the operator shall install temporary sediment controls as required in Part III.F.2.(b).iii.(C) below.

(C) In areas where non-vegetative controls are infeasible, the operator may alternatively utilize temporary perimeter controls. The operator must document in the SWP3 the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable. The operator must continue to inspect the BMPs at the frequencies established in Part III.F.7.(c) for unstabilized sites.

(D) The requirement for permittees to initiate stabilization is triggered as soon as it is known with reasonable certainty that construction activity at the site or in certain areas of the site will be stopped for 14 or more additional calendar days. If the initiation or completion of vegetative stabilization is prevented by circumstances beyond the control of the permittee, the permittee must employ and implement alternative stabilization measures immediately. When conditions at the site changes that would allow for vegetative stabilization, then the permittee must initiate or complete vegetative stabilization as soon as practicable.

iv. Final stabilization must be achieved prior to termination of permit coverage.

v. TCEQ does not expect that temporary or permanent stabilization measures to be applied to areas that are intended to be left un-vegetated or un-stabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).

(c) Sediment Control Practices

The SWP3 must include a description of any sediment control practices used to remove eroded soils from stormwater runoff, including the general timing or sequence for implementation of controls.

i. Sites With Drainage Areas of Ten or More Acres

(A) Sedimentation Basin(s)

(1) A sedimentation basin is required, where feasible, for a common drainage location that serves an area with ten (10) or more acres disturbed at one time. A sedimentation basin may be temporary or permanent, and must provide sufficient storage to contain a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained. When calculating the volume of runoff from a 2-year, 24-hour storm event, it is not required to include the flows from offsite areas and flow from onsite areas that are either undisturbed or have already undergone permanent stabilization, if these flows are diverted around both the disturbed areas of the site and the sediment basin. Capacity calculations shall be included in the SWP3.

(2) Where rainfall data is not available or a calculation cannot be performed, the sedimentation basin must provide at least 3,600 cubic feet of storage per acre drained until final stabilization of the site.

(3) If a sedimentation basin is not feasible, then the permittee shall provide equivalent control measures until final stabilization of the site. In determining whether installing a sediment basin is feasible, the permittee may consider factors such as site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. The permittee shall document the reason that the sediment basins are not feasible, and shall utilize equivalent control measures, which may include a series of smaller sediment basins.

(4) Unless infeasible, when discharging from sedimentation basins and impoundments, the permittee shall utilize outlet structures that withdraw water from the surface.

(B) Perimeter Controls: At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

ii. Controls for Sites With Drainage Areas Less than Ten Acres:

(A) Sediment traps and sediment basins may be used to control solids in stormwater runoff for drainage locations serving less than ten (10) acres. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

(B) Alternatively, a sediment basin that provides storage for a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained may be utilized. Where rainfall data is not available or a calculation cannot be performed, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained may be provided. If a calculation is performed, then the calculation shall be included in the SWP3.

(C) If sedimentation basins or impoundments are used, the permittee shall comply with the requirements in Part III.G.6 of this general permit.

3. Description of Permanent Stormwater Controls

A description of any stormwater control measures that will be installed during the construction process to control pollutants in stormwater discharges that may occur after construction operations have been completed must be included in the SWP3. Permittees are responsible for the installation and maintenance of stormwater management measures, as follows:

(a) permittees authorized under the permit for small construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site; or

(b) permittees authorized under the permit for large construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site and prior to submission of an NOT.

4. Other Required Controls and BMPs

(a) Permittees shall minimize, to the extent practicable, the off-site vehicle tracking of sediments and the generation of dust. The SWP3 shall include a description of controls utilized to accomplish this requirement.

(b) The SWP3 must include a description of construction and waste materials expected to be stored on-site and a description of controls to minimize pollutants from these materials.

(c) The SWP3 must include a description of potential pollutant sources in discharges of stormwater from all areas of the construction site where construction activity, including construction support activities, will be located, and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.

(d) Permittees shall place velocity dissipation devices at discharge locations and along the length of any outfall channel (i.e., runoff conveyance) to provide a non-erosive flow velocity from the structure to a water course, so that the natural physical and biological characteristics and functions are maintained and protected.

(e) Permittees shall design and utilize appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water from the site.

(f) Permittees shall ensure that all other required controls and BMPs comply with all of the requirements of Part III.G of this general permit.

(g) For demolition of any structure with at least 10,000 square feet of floor space that was built or renovated before January 1, 1980, and the receiving waterbody is impaired for polychlorinated biphenyls (PCBs):

i. Implement controls to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures to precipitation and to stormwater; and

ii. Ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

5. Documentation of Compliance with Approved State and Local Plans

(a) Permittees must ensure that the SWP3 is consistent with requirements specified in applicable sediment and erosion site plans or site permits, or stormwater management site plans or site permits approved by federal, state, or local officials.

(b) SWP3s must be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by state or local official for which the permittee receives written notice.

(c) If the permittee is required to prepare a separate management plan, including but not limited to a WPAP or Contributing Zone Plan in accordance with 30 TAC Chapter 213 (related to the Edwards Aquifer), then a copy of that plan must be either included in the SWP3 or made readily available upon request to authorized personnel of the TCEQ. The permittee shall maintain a copy of the approval letter for the plan in its SWP3.

6. Maintenance Requirements

(a) All protective measures identified in the SWP3 must be maintained in effective operating condition. If, through inspections or other means, as soon as the permittee determines that BMPs are not operating effectively, then the permittee shall perform maintenance as necessary to maintain the continued effectiveness

of stormwater controls, and prior to the next rain event if feasible. If maintenance prior to the next anticipated storm event is impracticable, the reason shall be documented in the SWP3 and maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

(b) If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the operator shall replace or modify the control as soon as practicable after making the discovery.

(c) Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.

(d) If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee shall work with the owner or operator of the property to remove the sediment.

7. Inspections of Controls

(a) Personnel provided by the permittee must inspect disturbed areas (cleared, graded, or excavated) of the construction site that do not meet the requirements of final stabilization in this general permit, all locations where stabilization measures have been implemented, areas of construction support activity covered under this permit, stormwater controls (including pollution prevention controls) for evidence of, or the potential for, the discharge of pollutants, areas where stormwater typically flows within the construction site, and points of discharge from the construction site.

i. Personnel conducting these inspections must be knowledgeable of this general permit, the construction activities at the site, and the SWP3 for the site.

ii. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC §305.128.

(b) Requirements for Inspections

i. Inspect all stormwater controls (including sediment and erosion control measures identified in the SWP3) to ensure that they are installed properly, appear to be operational, and minimizing pollutants in discharges, as intended.

ii. Identify locations on the construction site where new or modified stormwater controls are necessary.

iii. Check for signs of visible erosion and sedimentation that can be attributed to the points of discharge where discharges leave the construction site or discharge into any surface water in the state flowing within or adjacent to the construction site.

iv. Identify any incidents of noncompliance observed during the inspection.

v. Inspect locations where vehicles enter or exit the site for evidence of off-site sediment tracking.

vi. If an inspection is performed when discharges from the construction site are occurring: identify all discharge points at the site, observe and document the visual quality of the discharge (i.e., color, odor, floating, settled, or

suspended solids, foam, oil sheen, and other such indicators of pollutants in stormwater).

vii. Complete any necessary maintenance needed, based on the results of the inspection and in accordance with the requirements listed in Part III.F.6 above.

(c) Inspection frequencies:

i. Inspections of construction sites must be conducted at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, unless as otherwise provided below in Part III.F.7.(c).ii – v below.

ii. Inspection frequencies must be conducted at least once every month in areas of the construction site that meet final stabilization or have been temporarily stabilized.

iii. Inspection frequencies for construction sites, where runoff is unlikely due to the occurrence of frozen conditions at the site, must be conducted at least once every month until thawing conditions begin to occur (See definitions for thawing conditions in Part I.B). The SWP3 must also contain a record of the approximate beginning and ending dates of when frozen conditions occurred at the site, which resulted in inspections being conducted monthly, while those conditions persisted, instead of at the interval of once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

iv. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. The SWP3 must also contain a record of the total rainfall measured, as well as the approximate beginning and ending dates of when drought conditions occurred at the site, which resulted in inspections being conducted monthly, while those conditions persisted, instead of at the interval of once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

v. As an alternative to the inspection schedule in Part III.F.7.(c).i above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

vi. The inspection procedures described in Part III.F.7.(c).i. – v above can be performed at the frequencies and under the applicable conditions indicated for each schedule option, provided that the SWP3 reflects the current schedule and that any changes to the schedule are made in accordance with the following provisions: the inspection frequency schedule can only be changed a maximum of one time each month; the schedule change must be implemented at the beginning of a calendar month; and the reason for the schedule change documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(d) Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may provide inspection personnel with limited access to the areas described in Part III.F.7.(a) above.

i. Inspection of linear construction sites could require the use of vehicles that could compromise areas of temporary or permanent stabilization, cause

additional disturbance of soils, and result in the increase the potential for erosion. In these circumstances, controls must be inspected at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, but representative inspections may be performed.

ii. For representative inspections, personnel must inspect controls along the construction site for 0.25 mile above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the areas described in Part III.F.7.(a) above. The conditions of the controls along each inspected 0.25 mile portion may be considered as representative of the condition of controls along that reach extending from the end of the 0.25 mile portion to either the end of the next 0.25 mile inspected portion, or to the end of the project, whichever occurs first.

As an alternative to the inspection schedule described in Part III.F.7.(c).i above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

iii. The SWP3 for a linear construction site must reflect the current inspection schedule. Any changes to the inspection schedule must be made in accordance with the following provisions:

(A) the schedule may be changed a maximum of one time each month;

(B) the schedule change must be implemented at the beginning of a calendar month, and

(C) the reason for the schedule change must be documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(e) In the event of flooding or other uncontrollable situations which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable.

(f) Inspection Reports

i. A report summarizing the scope of any inspection must be completed within 24-hours following the inspection. The report must also include the date(s) of the inspection and major observations relating to the implementation of the SWP3. Major observations in the report must include: the locations of where erosion and discharges of sediment or other pollutants from the site have occurred; locations of BMPs that need to be maintained; locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and locations where additional BMPs are needed.

ii. Actions taken as a result of inspections must be described within, and retained as a part of, the SWP3. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWP3 and this permit. The report must be retained as part of the SWP3 and signed by the person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports).

iii. The names and qualifications of personnel making the inspections for the permittee may be documented once in the SWP3 rather than being included in each report.

(g) The SWP3 must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions to the SWP3 must be completed

within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the SWP3 and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable.

8. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for all eligible non-stormwater components of the discharge, as listed in Part II.A.3 of this permit.
9. The SWP3 must include the information required in Part III.B of this general permit.
10. The SWP3 must include pollution prevention procedures that comply with Part III.G.4 of this general permit.

Section G. Erosion and Sediment Control Requirements Applicable to All Sites

Except as provided in 40 CFR §§125.30-125.32, any discharge regulated under this general permit, with the exception of sites that obtained waivers based on low rainfall erosivity, must achieve, at a minimum, the following effluent limitations representing the degree of effluent reduction attainable by application of the best practicable control technology currently available (BPT).

1. *Erosion and sediment controls.* Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed, and maintained to:
   (a) Control stormwater volume and velocity within the site to minimize soil erosion in order to minimize pollutant discharges;
   (b) Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge point(s);
   (c) Minimize the amount of soil exposed during construction activity;
   (d) Minimize the disturbance of steep slopes;
   (e) Minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
   (f) If earth disturbance activities are located in close proximity to a surface water in the state, provide and maintain appropriate natural buffers if feasible and as necessary, around surface water in the state, depending on site-specific topography, sensitivity, and proximity to water bodies. Direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible. If providing buffers is infeasible, the permittee shall document the reason that natural buffers are infeasible and shall implement additional erosion and sediment controls to reduce sediment load;
   (g) Preserve native topsoil at the site, unless the intended function of a specific area of the site dictates that the topsoil be disturbed or removed, or it is infeasible; and
   (h) Minimize soil compaction. In areas of the construction site where final vegetative stabilization will occur or where infiltration practices will be installed, either:
      i. restrict vehicle and equipment use to avoid soil compaction; or

ii. prior to seeding or planting areas of exposed soil that have been compacted, use techniques that condition the soils to support vegetative growth, if necessary and feasible;

Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.

(i) TCEQ does not consider stormwater control features (e.g., stormwater conveyance channels, storm drain inlets, sediment basins) to constitute "surface water" for the purposes of triggering the buffer requirement in Part III.G.1.(f) above.

2. *Soil stabilization.* Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased. Temporary stabilization must be completed no more than 14 calendar days after initiation of soil stabilization measures, and final stabilization must be achieved prior to termination of permit coverage. In arid, semi-arid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative non-vegetative stabilization measures must be employed as soon as practicable. Refer to Part III.F.2.(b) for complete erosion control and stabilization practice requirements. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

3. *Dewatering.* Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited, unless managed by appropriate controls.

4. *Pollution prevention measures.* Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:

   (a) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

   (b) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater;

   (c) Minimize the exposure of waste materials by closing waste container lids at the end of the work day. For waste containers that do not have lids, where the container itself is not sufficiently secure enough to prevent the discharge of pollutants absent a cover and could leak, the permittee must provide either a cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment);and

   (d) Minimize the discharge of pollutants from spills and leaks, and implement chemical spill and leak prevention and response procedures.

5. *Prohibited discharges.* The following discharges are prohibited:

(a) Wastewater from wash out of concrete, unless managed by an appropriate control;

(b) Wastewater from wash out and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

(c) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;

(d) Soaps or solvents used in vehicle and equipment washing; and

(e) Toxic or hazardous substances from a spill or other release.

6. *Surface outlets.* When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.

Part IV. Stormwater Runoff from Concrete Batch Plants

Discharges of stormwater runoff from concrete batch plants present at regulated construction sites and operated as a construction support activity may be authorized under the provisions of this general permit, provided that the following requirements are met for concrete batch plant(s) authorized under this permit. Only the discharges of stormwater runoff and non-stormwater from concrete batch plants that meet the requirements of a construction support activity can be authorized under this permit (see the requirements for "Non-Stormwater Discharges" in Part II.A.3 and "Discharges of Stormwater Associated with Construction Support Activity" in Part II.A.2).

If discharges of stormwater runoff or non-stormwater from concrete batch plants are not authorized under this general permit, then discharges must be authorized under an alternative general permit or individual permit [see the requirement in Part II.A.2.(c)].

This permit does not authorize the discharge or land disposal of any wastewater from concrete batch plants at regulated construction sites. Authorization for these wastes must be obtained under an individual permit or an alternative general permit.

Section A. Benchmark Sampling Requirements

1. Operators of concrete batch plants authorized under this general permit shall sample the stormwater runoff from the concrete batch plants according to the requirements of this section of this general permit, and must conduct evaluations on the effectiveness of the SWP3 based on the following benchmark monitoring values:

Table 1. Benchmark Parameters

Benchmark Parameter	Benchmark Value	Sampling Frequency	Sample Type
Oil and Grease (*1)	15 mg/L	1/quarter (*2) (*3)	Grab (*4)
Total Suspended Solids (*1)	50 mg/L	1/quarter (*2) (*3)	Grab (*4)
pH	6.0 – 9.0 Standard Units	1/quarter (*2) (*3)	Grab (*4)
Total Iron(*1)	1.3 mg/L	1/quarter (*2) (*3)	Grab (*4)

(*1) All analytical results for these parameters must be obtained from a laboratory that is accredited based on rules located in 30 TAC §25.4 (a) or through the National Environmental Laboratory Accreditation Program (NELAP). Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §136.1(c) and 40 CFR §122.44(i)(1)(iv).

(*2) When discharge occurs. Sampling is required within the first 30 minutes of discharge. If it is not practicable to take the sample, or to complete the sampling, within the first 30 minutes, sampling must be completed within the first hour of discharge. If sampling is not completed within the first 30 minutes of discharge, the reason must be documented and attached to all required reports and records of the sampling activity.

(*3) Sampling must be conducted at least once during each of the following periods. The first sample must be collected during the first full quarter that a stormwater discharge occurs from a concrete batch plant authorized under this general permit.

January through March
April through June
July through September
October through December

For projects lasting less than one full quarter, a minimum of one sample shall be collected, provided that a stormwater discharge occurred at least once following submission of the NOI or following the date that automatic authorization was obtained under Section II.E.2, and prior to terminating coverage.

(*4) A grab sample shall be collected from the stormwater discharge resulting from a storm event that is at least 0.1 inches of measured precipitation that occurs at least 72 hours from the previously measurable storm event. The sample shall be collected downstream of the concrete batch plant, and where the discharge exits any BMPs utilized to handle the runoff from the batch plant, prior to commingling with any other water authorized under this general permit.

2. The permittee must compare the results of sample analyses to the benchmark values above, and must include this comparison in the overall assessment of the SWP3's effectiveness. Analytical results that exceed a benchmark value are not a violation of this permit, as these values are not numeric effluent limitations. Results of analyses are indicators that modifications of the SWP3 should be assessed and may be necessary to protect water quality. The operator must investigate the cause for each exceedance and must document the results of this investigation in the SWP3 by the end of the quarter following the sampling event.

   The operator's investigation must identify the following:

   (a) any additional potential sources of pollution, such as spills that might have occurred;

   (b) necessary revisions to good housekeeping measures that are part of the SWP3;

   (c) additional BMPs, including a schedule to install or implement the BMPs; and

   (d) other parts of the SWP3 that may require revisions in order to meet the goal of the benchmark values.

   Background concentrations of specific pollutants may also be considered during the investigation. If the operator is able to relate the cause of the exceedance to background concentrations, then subsequent exceedances of benchmark values for that pollutant may be resolved by referencing earlier findings in the SWP3. Background concentrations may be identified by laboratory analyses of samples of stormwater run-on to the permitted facility, by laboratory analyses of samples of stormwater run-off from adjacent non-industrial areas, or by identifying the pollutant is a naturally occurring material in soils at the site.

Section B. Best Management Practices (BMPs) and SWP3 Requirements

Minimum SWP3 Requirements – The following are required in addition to other SWP3 requirements listed in this general permit, which include, but are not limited to the applicable requirements located in Part III.F.7 of this general permit, as follows:

1. Description of Potential Pollutant Sources - The SWP3 must provide a description of potential sources (activities and materials) that can cause, have a reasonable potential to cause or contribute to a violation of water quality standards or have been found to cause, or contribute to, the loss of a designated use of surface water in the state in stormwater discharges associated with concrete batch plants authorized under this permit. The SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater discharges associated with industrial activity and non-stormwater discharges (described in Part II.A.3 of this general permit), in compliance with the terms and conditions of this general permit, including the protection of water quality, and must ensure the implementation of these practices.

   The following must be developed, at a minimum, in support of developing this description:

   (a) Drainage – The site map must include the following information:

      i. the location of all outfalls for stormwater discharges associated with concrete batch plants that are authorized under this permit;

      ii. a depiction of the drainage area and the direction of flow to the outfall(s);

      iii. structural controls used within the drainage area(s);

      iv. the locations of the following areas associated with concrete batch plants that are exposed to precipitation: vehicle and equipment maintenance activities (including fueling, repair, and storage areas for vehicles and equipment scheduled for maintenance); areas used for the treatment, storage, or disposal of wastes; liquid storage tanks; material processing and storage areas; and loading and unloading areas; and

      v. the locations of the following: any bag house or other dust control device(s); recycle/sedimentation pond, clarifier or other device used for the treatment of facility wastewater (including the areas that drain to the treatment device); areas with significant materials; and areas where major spills or leaks have occurred.

   (b) Inventory of Exposed Materials – A list of materials handled at the concrete batch plant that may be exposed to stormwater and that have a potential to affect the quality of stormwater discharges associated with concrete batch plants that are authorized under this general permit.

   (c) Spills and Leaks - A list of significant spills and leaks of toxic or hazardous pollutants that occurred in areas exposed to stormwater and that drain to stormwater outfalls associated with concrete batch plants authorized under this general permit must be developed, maintained, and updated as needed.

   (d) Sampling Data - A summary of existing stormwater discharge sampling data must be maintained, if available.

2. Measures and Controls - The SWP3 must include a description of management controls to regulate pollutants identified in the SWP3's "Description of Potential Pollutant Sources" from Part IV.B.1 of this permit, and a schedule for implementation of the measures and controls. This must include, at a minimum:

(a) Good Housekeeping - Good housekeeping measures must be developed and implemented in the area(s) associated with concrete batch plants.

i. Operators must prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), settled dust, or other significant materials from paved portions of the site that are exposed to stormwater. Measures used to minimize the presence of these materials may include regular sweeping or other equivalent practices. These practices must be conducted at a frequency that is determined based on consideration of the amount of industrial activity occurring in the area and frequency of precipitation, and shall occur at least once per week when cement or aggregate is being handled or otherwise processed in the area.

ii. Operators must prevent the exposure of fine granular solids, such as cement, to stormwater. Where practicable, these materials must be stored in enclosed silos, hoppers or buildings, in covered areas, or under covering.

(b) Spill Prevention and Response Procedures - Areas where potential spills that can contribute pollutants to stormwater runoff, and the drainage areas from these locations, must be identified in the SWP3. Where appropriate, the SWP3 must specify material handling procedures, storage requirements, and use of equipment. Procedures for cleaning up spills must be identified in the SWP3 and made available to the appropriate personnel.

(c) Inspections - Qualified facility personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) must be identified to inspect designated equipment and areas of the facility specified in the SWP3. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC §305.128. Inspections of facilities in operation must be performed once every seven days. Inspections of facilities that are not in operation must be performed at a minimum of once per month. The current inspection frequency being implemented at the facility must be recorded in the SWP3. The inspection must take place while the facility is in operation and must, at a minimum, include all areas that are exposed to stormwater at the site, including material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, truck wash down and equipment cleaning areas. Follow-up procedures must be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections must be maintained and be made readily available for inspection upon request.

(d) Employee Training - An employee training program must be developed to educate personnel responsible for implementing any component of the SWP3, or personnel otherwise responsible for stormwater pollution prevention, with the provisions of the SWP3. The frequency of training must be documented in the SWP3, and at a minimum, must consist of one training prior to the initiation of operation of the concrete batch plant.

(e) Record Keeping and Internal Reporting Procedures - A description of spills and similar incidents, plus additional information that is obtained regarding the quality and quantity of stormwater discharges, must be included in the SWP3. Inspection and maintenance activities must be documented and records of those inspection and maintenance activities must be incorporated in the SWP3.

(f) Management of Runoff - The SWP3 shall contain a narrative consideration for reducing the volume of runoff from concrete batch plants by diverting runoff or otherwise managing runoff, including use of infiltration, detention ponds, retention ponds, or reusing of runoff.

3. Comprehensive Compliance Evaluation – At least once per year, one or more qualified personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) shall conduct a compliance evaluation of the plant. The evaluation must include the following.

   (a) Visual examination of all areas draining stormwater associated with regulated concrete batch plants for evidence of, or the potential for, pollutants entering the drainage system. These include, but are not limited to: cleaning areas, material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, and truck wash down and equipment cleaning areas. Measures implemented to reduce pollutants in runoff (including structural controls and implementation of management practices) must be evaluated to determine if they are effective and if they are implemented in accordance with the terms of this permit and with the permittee's SWP3. The operator shall conduct a visual inspection of equipment needed to implement the SWP3, such as spill response equipment.

   (b) Based on the results of the evaluation, the following must be revised as appropriate within two weeks of the evaluation: the description of potential pollutant sources identified in the SWP3 (as required in Part IV.B.1, "Description of Potential Pollutant Sources"); and pollution prevention measures and controls identified in the SWP3 (as required in Part IV.B.2, "Measures and Controls"). The revisions may include a schedule for implementing the necessary changes.

   (c) The permittee shall prepare and include in the SWP3 a report summarizing the scope of the evaluation, the personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the SWP3, and actions taken in response to the findings of the evaluation. The report must identify any incidents of noncompliance. Where the report does not identify incidences of noncompliance, the report must contain a statement that the evaluation did not identify any incidence(s), and the report must be signed according to 30 TAC §305.128, relating to Signatories to Reports.

   (d) The Comprehensive Compliance Evaluation may substitute for one of the required inspections delineated in Part IV.B.2.(c) of this general permit.

Section C. Prohibition of Wastewater Discharges

Wastewater discharges associated with concrete production including wastewater disposal by land application are not authorized under this general permit. These wastewater discharges must be authorized under an alternative TCEQ water quality permit or otherwise disposed of in an authorized manner. Discharges of concrete truck wash out at construction sites may be authorized if conducted in accordance with the requirements of Part V of this general permit.

Part V. Concrete Truck Wash Out Requirements

This general permit authorizes the land disposal of wash out from concrete trucks at construction sites regulated under this general permit, provided the following requirements are met. Any discharge of concrete production waste water to surface water in the state must be authorized under a separate TCEQ general permit or individual permit.

A. Discharge of concrete truck wash out water to surface water in the state, including discharge to storm sewers, is prohibited by this general permit.

B. Concrete truck wash out water shall be disposed in areas at the construction site where structural controls have been established to prevent discharge to surface water

in the state, or to areas that have a minimal slope that allow infiltration and filtering of wash out water to prevent discharge to surface water in the state. Structural controls may consist of temporary berms, temporary shallow pits, temporary storage tanks with slow rate release, or other reasonable measures to prevent runoff from the construction site.

C. Wash out of concrete trucks during rainfall events shall be minimized. The discharge of concrete truck wash out water is prohibited at all times, and the operator shall insure that its BMPs are sufficient to prevent the discharge of concrete truck wash out as the result of rainfall or stormwater runoff.

D. The disposal of wash out water from concrete trucks, made under authorization of this general permit must not cause or contribute to groundwater contamination.

E. If a SWP3 is required to be implemented, the SWP3 shall include concrete wash out areas on the associated site map.

Part VI. Retention of Records

The permittee must retain the following records for a minimum period of three (3) years from the date that a NOT is submitted as required in Part II.F.1 and 2 of this permit. For activities in which an NOT is not required, records shall be retained for a minimum period of three (3) years from the date that the operator terminates coverage under Section II.F.3 of this permit. Records include:

A. A copy of the SWP3;

B. All reports and actions required by this permit, including a copy of the construction site notice;

C. All data used to complete the NOI, if an NOI is required for coverage under this general permit; and

D. All records of submittal of forms submitted to the operator of any MS4 receiving the discharge and to the secondary operator of a large construction site, if applicable.

Part VII. Standard Permit Conditions

A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and statutes under which it was issued (CWA and TWC), and is grounds for enforcement action, for terminating, revoking and reissuance, or modification, or denying coverage under this general permit, or for requiring a discharger to apply for and obtain an individual TPDES permit, based on rules located in TWC §23.086, 30 TAC §305.66 and 40 CFR §122.41 (a).

B. Authorization under this general permit may be modified, suspended, revoked and reissued, terminated or otherwise suspended for cause, based on rules located in TWC §23.086, 30 TAC §305.66 and 40 CFR §122.41(f). Filing a notice of planned changes or anticipated non-compliance by the permittee does not stay any permit condition. The permittee must furnish to the executive director, upon request and within a reasonable time, any information necessary for the executive director to determine whether cause exists for modifying, revoking and reissuing, terminating or, otherwise suspending authorization under this permit, based on rules located in TWC §23.086, 30 TAC §305.66 and 40 CFR §122.41 (h). Additionally, the permittee must provide to the executive director, upon request, copies of all records that the permittee is required to maintain as a condition of this general permit.

C. It is not a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.

D. Inspection and entry shall be allowed under TWC Chapters 26-28, Texas Health and Safety Code §§361.032-361.033 and 361.037, and 40 CFR §122.41(i). The statement in TWC §26.014 that commission entry of a facility shall occur according to an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility or site, but merely describes the commission's duty to observe appropriate rules and regulations during an inspection.

E. The discharger is subject to administrative, civil, and criminal penalties, as applicable, under TWC Chapter 7 for violations including but not limited to the following:

1. negligently or knowingly violating the federal CWA §§301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under CWA §402, or any requirement imposed in a pretreatment program approved under CWA §§402(a)(3) or 402(b)(8);
2. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance; and
3. knowingly violating CWA §303 and placing another person in imminent danger of death or serious bodily injury.

F. All reports and other information requested by the executive director must be signed by the person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports).

G. Authorization under this general permit does not convey property or water rights of any sort and does not grant any exclusive privilege.

H. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

I. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

J. The permittee shall comply with the monitoring and reporting requirements in 40 CFR §122.41(j) and (l), as applicable.

K. Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §136.1(c) and 40 CFR §122.44(i)(1)(iv).

Part VIII. Fees

A. A fee of must be submitted along with the NOI:

1. $325 if submitting a paper NOI, or
2. $225 if submitting an NOI electronically.

B. Fees are due upon submission of the NOI. An NOI will not be declared administratively complete unless the associated fee has been paid in full.

C. No separate annual fees will be assessed for this general permit. The Water Quality Annual Fee has been incorporated into the NOI fees as described above.

D. Effective September 1, 2018, applicants seeking coverage under an NOI or LREW must submit their application using the online e-Permits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

Appendix A: Automatic Authorization

Periods of Low Erosion Potential by County – Eligible Date Ranges

Andrews: Nov. 15 - Apr. 30

Archer: Dec. 15 - Feb. 14

Armstrong: Nov. 15 - Apr. 30

Bailey: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Baylor: Dec. 15 - Feb. 14

Borden: Nov. 15 - Apr. 30

Brewster: Nov. 15 - Apr. 30

Briscoe: Nov. 15 - Apr. 30

Brown: Dec. 15 - Feb. 14

Callahan: Dec. 15 - Feb. 14

Carson: Nov. 15 - Apr. 30

Castro: Nov. 15 - Apr. 30

Childress: Dec. 15 - Feb. 14

Cochran: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Coke: Dec. 15 - Feb. 14

Coleman: Dec. 15 - Feb. 14

Collingsworth: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28

Concho: Dec. 15 - Feb. 14

Cottle: Dec. 15 - Feb. 14

Crane: Nov. 15 - Apr. 30

Crockett: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Crosby: Nov. 15 - Apr. 30

Culberson: Nov. 1 - May 14

Dallam: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Dawson: Nov. 15 - Apr. 30

Deaf Smith: Nov. 15 - Apr. 30

Dickens: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Dimmit: Dec. 15 - Feb. 14

Donley: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28

Eastland: Dec. 15 - Feb. 14

Ector: Nov. 15 - Apr. 30

Edwards: Dec. 15 - Feb. 14

El Paso: Jan. 1 - Jul. 14, or May 15 - Jul. 31, or Jun. 1 - Aug. 14, or Jun. 15 - Sept. 14, or Jul. 1 - Oct. 14, or Jul. 15 - Oct. 31, or Aug. 1 - Apr. 30, or Aug. 15 - May 14, or Sept. 1 - May 30, or Oct. 1 - Jun. 14, or Nov. 1 - Jun. 30, or Nov. 15 - Jul. 14

Fisher: Dec. 15 - Feb. 14

Floyd: Nov. 15 - Apr. 30

Foard: Dec. 15 - Feb. 14

Gaines: Nov. 15 - Apr. 30

Garza: Nov. 15 - Apr. 30

Glasscock: Nov. 15 - Apr. 30

Hale: Nov. 15 - Apr. 30

Hall: Feb. 1 - Mar. 30

Hansford: Nov. 15 - Apr. 30

Hardeman: Dec. 15 - Feb. 14

Hartley: Nov. 15 - Apr. 30

Haskell: Dec. 15 - Feb. 14

Hockley: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Howard: Nov. 15 - Apr. 30

Hudspeth: Nov. 1 - May 14

Hutchinson: Nov. 15 - Apr. 30

Irion: Dec. 15 - Feb. 14

Jeff Davis: Nov. 1 - Apr. 30 or Nov. 15 - May 14

Jones: Dec. 15 - Feb. 14

Kent: Nov. 15 - Jan. 14 or Feb. 1 - Mar. 30

Kerr: Dec. 15 - Feb. 14

Kimble: Dec. 15 - Feb. 14

King: Dec. 15 - Feb. 14

Kinney: Dec. 15 - Feb. 14

Knox: Dec. 15 - Feb. 14

Lamb: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Loving: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Lubbock: Nov. 15 - Apr. 30

Lynn: Nov. 15 - Apr. 30

Martin: Nov. 15 - Apr. 30

Mason: Dec. 15 - Feb. 14

Maverick: Dec. 15 - Feb. 14

McCulloch: Dec. 15 - Feb. 14

Menard: Dec. 15 - Feb. 14

Midland: Nov. 15 - Apr. 30

Mitchell: Nov. 15 - Apr. 30

Moore: Nov. 15 - Apr. 30

Motley: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Nolan: Dec. 15 - Feb. 14

Oldham: Nov. 15 - Apr. 30

Parmer: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Pecos: Nov. 15 - Apr. 30

Potter: Nov. 15 - Apr. 30

Presidio: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Randall: Nov. 15 - Apr. 30

Reagan: Nov. 15 - Apr. 30

Real: Dec. 15 - Feb. 14

Reeves: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Runnels: Dec. 15 - Feb. 14

Schleicher: Dec. 15 - Feb. 14

Scurry: Nov. 15 - Apr. 30

Shackelford: Dec. 15 - Feb. 14

Sherman: Nov. 15 - Apr. 30

Stephens: Dec. 15 - Feb. 14

Sterling: Nov. 15 - Apr. 30

Stonewall: Dec. 15 - Feb. 14

Sutton: Dec. 15 - Feb. 14

Swisher: Nov. 15 - Apr. 30

Taylor: Dec. 15 - Feb. 14

Terrell: Nov. 15 - Apr. 30

Terry: Nov. 15 - Apr. 30

Throckmorton: Dec. 15 - Feb. 14

Tom Green: Dec. 15 - Feb. 14

Upton: Nov. 15 - Apr. 30

Uvalde: Dec. 15 - Feb. 14

Val Verde: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Ward: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Wichita: Dec. 15 - Feb. 14

Wilbarger: Dec. 15 - Feb. 14

Winkler: Nov. 1 - Apr. 30, or Nov. 15 - May 14

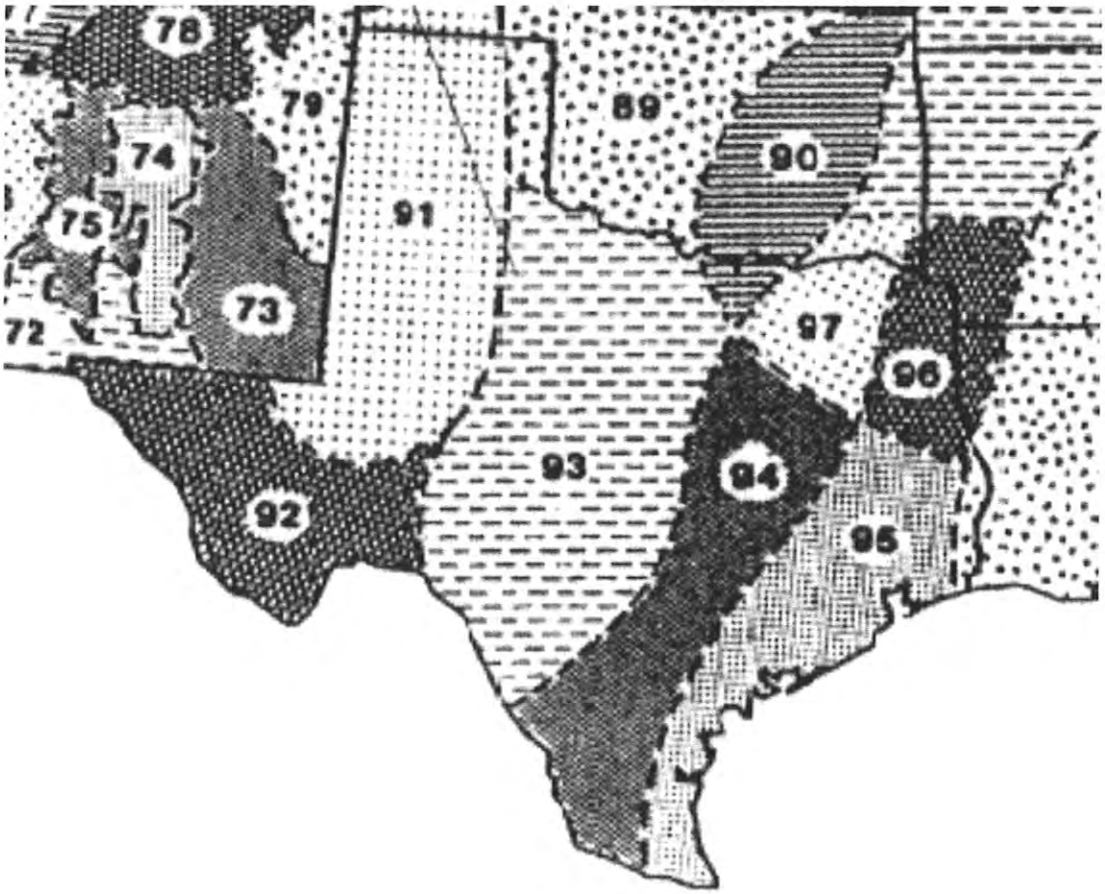
Yoakum: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Young: Dec. 15 - Feb. 14

Wheeler: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28

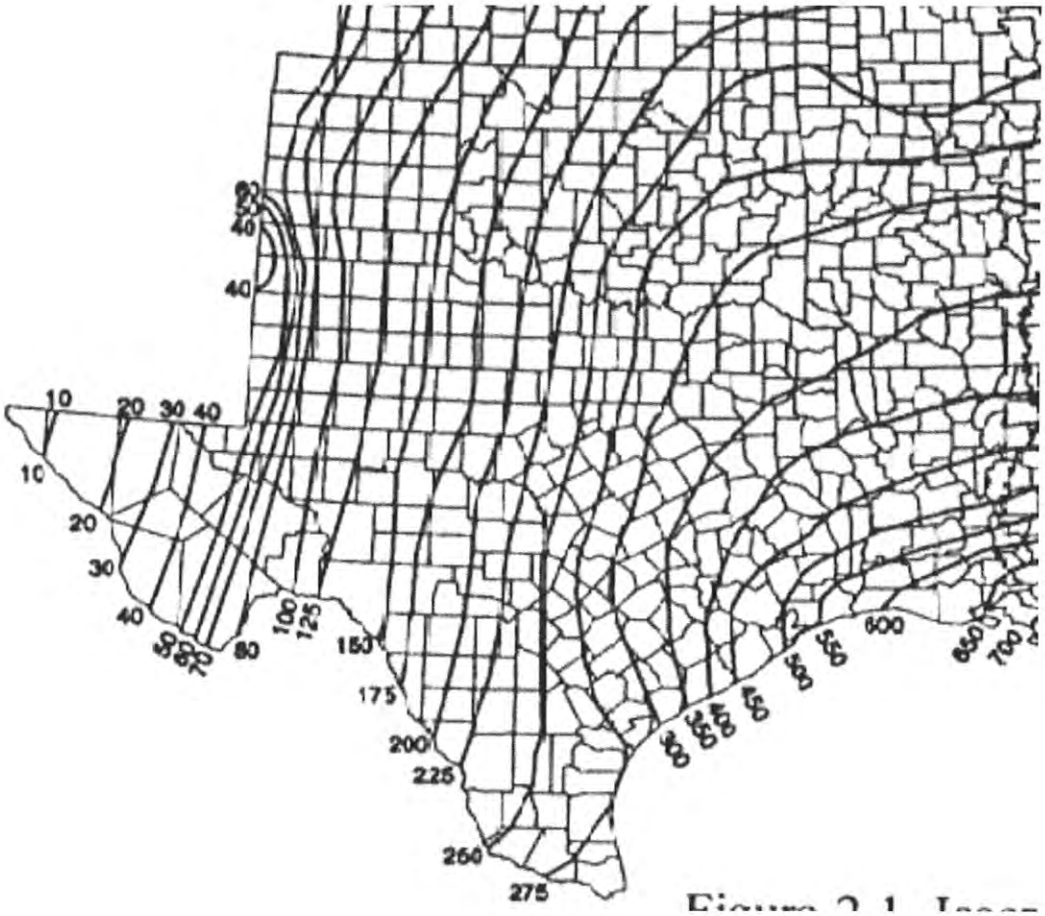
Zavala: Dec. 15 - Feb. 14

Appendix B: Erosivity Index (EI) Zones in Texas



Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix C: Isoerodent Map



Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix D: Erosivity Indices for EI Zones in Texas

Periods:

EI #	1/1	1/16	1/31	2/15	3/1	3/16	3/31	4/15	4/30	5/15	5/30	6/14	6/29	7/14	7/29	8/13	8/28	9/12	9/27	10/12	10/27	11/11	11/26	12/11	12/31
89	0	1	1	2	3	4	7	2	8	27	38	48	55	62	69	76	83	90	94	97	98	99	100	100	100
90	0	1	2	3	4	6	8	13	21	29	37	46	54	60	65	69	74	81	87	92	95	97	98	99	100
91	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
92	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
93	0	1	1	2	3	4	6	8	13	25	40	49	56	62	67	72	76	80	85	91	97	98	99	99	100
94	0	1	2	4	6	8	10	15	21	29	38	47	53	57	61	65	70	76	83	88	91	94	96	98	100
95	0	1	3	5	7	9	11	14	18	27	35	41	46	51	57	62	68	73	79	84	89	93	96	98	100
96	0	2	4	6	9	12	17	23	30	37	43	49	54	58	62	66	70	74	78	82	86	90	94	97	100
97	0	1	3	5	7	10	14	20	28	37	48	56	61	64	68	72	77	81	86	89	92	95	98	99	100
106	0	3	6	9	13	17	21	27	33	38	44	49	55	61	67	71	75	78	81	84	86	90	94	97	100

* Each period begins on the date listed in the table above and lasts until the day before the following period. The final period begins on December 11 and ends on December 31.

Table adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

NOTICE OF INTENT [NOI]

A copy of the Notice of Intent (NOI) executed and filed with the TCEQ by the Primary Operator for this project is provided in this section.

CONSTRUCTION SITE NOTICE [CSN]

A copy of the Construction Site Notice(s) posted at this site is provided in this section and will remain posted until such time that final stabilization has met been.

NOTIFICATIONS

This site is located within the MS4 jurisdiction of the City of Houston. This entity has been notified of the project by means of the letter copied herein and a copy of the NOI noted above.

In accordance with the Texas General Permit, the Secondary Operator has been notified of the commencement of construction, as exhibited in the letter found in this section.

A copy of the signed Construction Site Notice (CSN) for the Secondary Operator of this project is provided in this section and has been posted at the project site. The MS4 entity has been notified by means of a letter, as exhibited in this section.

CERTIFICATIONS

Any required Certifications are located in this section.

DELEGATION OF AUTHORITY AND INSPECTOR QUALIFICATIONS

Inspection authority is delegated to Construction EcoServices by an Officer of the Primary Operator entity in the document copied in this section. This Delegation Letter has also been forwarded to the TCEQ by the Operator.
The appropriate Inspector(s) qualifications are also located in this section.

COPY OF THE PRIMARY OPERATOR'S MS4 NOTIFICATION LETTER REPLACES THIS PAGE

COPY OF THE PRIMARY OPERATOR'S NOI REPLACES THIS PAGE

COPY OF THE PRIMARY OPERATOR'S CONSTRUCTION SITE NOTICE REPLACES THIS PAGE

COPY OF SECONDARY OPERATOR'S MS4 NOTIFICATION LETTER REPLACES THIS PAGE

COPY OF SECONDARY OPERATOR'S CONSTRUCTION SITE NOTIFICATION LETTER REPLACES THIS PAGE

COPY OF THE PRIMARY OPERATOR'S NOTIFICATION LETTER TO SECONDARY OPERATOR REPLACES THIS PAGE

COPY OF SECONDARY OPERATOR'S NOTIFICATION LETTER TO PRIMARY OPERATOR REPLACES THIS PAGE

COPY OF THE PRIMARY SIGNED "DELEGATION OF SIGNATORIES OF REPORTS" LETTER TO THE TCEQ/EXECUTIVE DIRECTOR REPLACES THIS PAGE

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

John Moss
Director of Business Development
Construction EcoServices

Training Received

- Construction EcoServices internal training course
- Associated General Contractors (AGC) training course
- International Erosion Control Association (IECA) training course
- TCEQ Stormwater Phase II Construction Activity Workshop
- Extensive field training

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- Stormwater Site Inspector Training
- TCEQ Stormwater pollution prevention regulations

Previous Construction Experience

5 years

Stormwater Construction Inspection Experience

Since April 2003

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Dale Bankston
Vice President of Operations
Construction EcoServices

Training Received

- Construction EcoServices internal training course
- Associated General Contractors course, "Complying with Stormwater Regulations"
- International Erosion Control Association course, "How to Select, Install and Inspect Construction Site Erosion and Sediment Control BMPs"
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage

Previous Construction Experience

14 years

Stormwater Inspection Experience

Since September 2006

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

James Brock
Executive Project Manager
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice
- Installation training on SWPPP BMP's

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

15 years

Stormwater Inspection Experience

Since 2006

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Evan Curry
Project Manager
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

6 months

Stormwater Inspection Experience

February 2016

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Blair Wilder
Project Manager
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

1 month of Construction experience

Stormwater Inspection Experience

Since August 2017

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Charles Fowler (CJ)

Project Manager

Construction EcoServices

Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Storm Water Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Storm Water Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of storm water BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect storm water quality features to meet City and County regulation requirements.
- How to perform maintenance of storm water quality features to stay in compliance with City and County regulations
- Field study of storm water quality units and features

Previous Construction Experience

6 months

Stormwater Inspection Experience

July 2020

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Peter Diaz – QCIS/CISEC
Inspections Manager
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice
- QCIS – Qualified Inspector of Stormwater
    - Completed 09/14/2016
    - Certification Number – 3994309
- CISEC – Certified Inspector of Sediment and Erosion Control
    - Completed – January 15, 2018
    - Certification Number - 2330

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

16 months

Stormwater Inspection Experience

Since August 2012

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Aaron Campbell - QCIS/CISEC
CTX Project Manager/Inspections Manager
Construction EcoServices
Inspection Services Group

Training Received

- Construction Eco Services internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice
- QCIS – Qualified Inspector of Stormwater
    - Completed – September 15, 2016
    - Certification Number – 3996260
- CISEC – Certified Inspector of Sediment and Erosion Control
    - Completed – September 21, 2018
    - Certification Number - 2493

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

3 years

Stormwater Inspection Experience

Since April 2013

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Clayton Rollins-CISEC-TX
CISEC #1391
CTX Lead Inspector / Project Manager
Construction EcoServices
Inspection Services Group

Training Received

- Construction Eco Services internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

3 years

Stormwater Inspection Experience

Since April 2013

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Anthony Correa
NTX Project Manager/Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

1 month of Construction experience

Stormwater Inspection Experience

Since August 2018

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Patrick Gilley
Project Coordinator
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

1 year of Construction experience

Stormwater Inspection Experience

Since April 2016

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Steven Harder
CTX Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

1 month of Construction experience

Stormwater Inspection Experience

Since August 2019

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Ethan Foley
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Storm Water Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Storm Water Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of storm water BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect storm water quality features to meet City and County regulation requirements.
- How to perform maintenance of storm water quality features to stay in compliance with City and County regulations
- Field study of storm water quality units and features

Previous Construction Experience

2 Years of Construction experience

Storm Water Inspection Experience

Since November 2020

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector
Jeff Galindo
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Storm Water Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Storm Water Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of storm water BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect storm water quality features to meet City and County regulation requirements.
- How to perform maintenance of storm water quality features to stay in compliance with City and County regulations
- Field study of storm water quality units and features

Previous Construction Experience
6 Months of Construction experience

Storm Water Inspection Experience
Since April 2021

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Luis Gomez
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience

1 month of Construction experience

Stormwater Inspection Experience

Since October 2018

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector
Daniel Dutton
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience
1 month of Construction experience

Stormwater Inspection Experience
Since January 2019

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector
Matt Piasecki
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Stormwater Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Stormwater Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of Stormwater BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect Stormwater quality features to meet City and County regulation requirements.
- How to perform maintenance of Stormwater quality features to stay in compliance with City and County regulations
- Field study of Stormwater quality units and features

Previous Construction Experience
1 month of Construction experience

Stormwater Inspection Experience
Since September 2019

STORM WATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Stefan Speck
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Storm Water Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Storm Water Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of storm water BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect storm water quality features to meet City and County regulation requirements.
- How to perform maintenance of storm water quality features to stay in compliance with City and County regulations
- Field study of storm water quality units and features

Previous Construction Experience

3 months of Construction experience

Storm Water Inspection Experience

Since February 2020

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Andrew Klippert
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Storm Water Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Storm Water Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of storm water BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect storm water quality features to meet City and County regulation requirements.
- How to perform maintenance of storm water quality features to stay in compliance with City and County regulations
- Field study of storm water quality units and features

Previous Construction Experience

1 month of Construction experience

Storm Water Inspection Experience

Since May 2020

STORMWATER INSPECTOR QUALIFICATIONS
Construction EcoServices

Inspector

Andrew Heard
Site Inspector
Construction EcoServices
Inspection Services Group

Training Received

- Construction EcoServices internal training course
- Four-week Storm Water Site Inspector training program as Inspection Apprentice

Training Content

- How to select, install and inspect construction site erosion and sediment control BMPs for TPDES Storm Water Permit Compliance
- SWPPP narrative plan development and required elements
- Field study of storm water BMPs for effectiveness and appropriate usage
- EPA, TCEQ permits and local ordinance guidelines for SWPPP and BMPs
- How to inspect storm water quality features to meet City and County regulation requirements.
- How to perform maintenance of storm water quality features to stay in compliance with City and County regulations
- Field study of storm water quality units and features

Previous Construction Experience

2 Years of Construction experience

Storm Water Inspection Experience

Since May 2021

AMENDMENT #	DATE	BRIEF DESCRIPTION OF AMENDMENT	PREPARED BY

INSPECTION RECORDS

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ATTACHMENT 3

Soil Management Plan

GOLDER
MEMBER OF WSP

TECHNICAL MEMORANDUM

DATE September 3, 2021 **Project No.** 20144747

TO Mr. Chad Williamson - Union Pacific Railroad
Mr. Kevin Peterburs - Union Pacific Railroad

FROM Patrick Marty, PMP - Golder Associates Inc.
Matthew K. Wickham, P.G. – Golder Associates Inc.

HOUSTON, TX – ENGLEWOOD YARD – NORTH BYPASS SOIL MANAGEMENT PLAN

Golder Associates Inc. (Golder), a member of WSP, prepared this summary of the soil management plan for the Union Pacific Railroad (UPRR) Engineering Englewood Yard - North Bypass Project (the Project Area) (**Figure 1**) located in Houston, Texas. The Project Area includes a portion of the UPRR Houston Wood Preserving Works (HWPW) affected property (SWR# 31547 and TCEQ Hazardous Waste Permit No. 50343). The HWPW site had been historically used for wood preserving operations. The planned construction activities for the Project Area within the HWPW affected property will include excavation of soils from the following areas (**Figure 1**):

- HWPW Soil and Railroad Ballast Cap – estimated 2,761 cubic yards (in-place);
- Soils Adjacent to the Railroad Ballast Cap (east of Waco Street) – estimated 508 cubic yards (in-place); and
- Railroad Ballast Cap at the Englewood Intermodal Yard – estimated 45 cubic yards (in-place).

Based on the historical operations at the HWPW site in conjunction with environmental sampling that had been conducted in these areas, the planned construction activities will likely encounter soils previously impacted from the historical operations (e.g., wood preserving operations). As a result, soils generated from this area will require special handling and will be restricted to off-site disposal at an UPRR authorized TCEQ permitted landfill. Details and recommendations of the soil management plan are provided below.

Field Activities

Golder conducted the soil sampling at the Project Area on January and March 2021 within the HWPW area to refine the waste characterization of the soils planned to be excavated as part of the UPRR Engineering project. Golder oversaw the sampling of 14 shallow soil borings (SE-14 through SE-21 adjacent to HWPW Railroad Ballast Cap and CA-01 through CA-06 within the Soil and Railroad Ballast Cap Areas) within the areas proposed to be excavated within the Project Area. For the Soils Adjacent to the Railroad Ballast Cap (east of Waco Street), soil borings SE-14 through SE-21 were advanced to total depths of up to 1.5 feet below ground surface (bgs) (proposed excavation depths for the new railbed range from a few inches to approximately 3 feet as shown on the cross sections (Station Numbers 1072+50 to 1079+00) in **Attachment A).** Soil borings CA-01 through CA-06 located within the Soil Cap and Railroad Ballast Cap Areas were advanced to total depths up to 8 feet bgs, corresponding to the planned excavation depths, using hand auger tool sampling techniques. The approximate sample locations are shown on **Figure 1**.

Golder Associates Inc.
2201 Double Creek Dr, Suite 4004, Round Rock, Texas, USA 78664 T: +1 512 671-3434 F: +1 512 671-3446

Golder and the G logo are trademarks of Golder Associates Corporation.

The soil samples were collected from the soil borings and screened in the field for organic vapors using a photoionization detector (PID). A total of 18 soil samples were collected during the investigation. Below is a summary of sample intervals and the quantity of samples collected:

- Soil Borings SE-14 through SE-21:
  - Soils Adjacent to Railroad Ballast Cap (east of Waco Street):
    - 0 to 1.5 feet bgs – 8 soil boring locations (8 samples).

- Soil Borings CA-01 through CA-06:
  - Soil Cap Area (CA-03 and CA-04):
    - Soil Cap:
      - 0 to 1.5 feet bgs - 2 soil boring locations (2 samples).
    - Below Soil Cap:
      - 1.5 to 1.67 feet bgs – 2 soil boring locations (2 samples).
  - Railroad Ballast Cap Area:
    - 0 to 5 feet bgs – 4 soil boring locations (4 samples); and
    - 5 to 8 feet bgs – 2 soil boring locations (2 samples).

Soil samples collected from SE-14 through SE-21 were shipped under proper chain-of-custody protocol to Pace National in Mt. Juliet, Tennessee and analyzed for the following constituents:

- Volatile Organic Compounds (VOCs) by SW-846 Method 8260;
- Semi-Volatile Organic Compounds (SVOCs) by SW-846 Method 8270;
- Total Petroleum Hydrocarbons (TPH) by Texas Method 1005;
- RCRA Metals by SW-846 Methods 6000/7000 series; and
- pH by EPA Method 9045.

Soil samples collected from CA-01 through CA-06 were shipped under proper chain-of-custody protocol to Pace National in Mt. Juliet, Tennessee and analyzed for the following constituents:

- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) SW-846 Method 8260;
- SVOCs by SW-846 Method 8270;
- TPH by Texas Method 1005;
- Total arsenic, chromium, and lead by SW-846 Methods 6000/7000 series; and
- RCRA Metals by SW-846 Methods 6000/7000 series by Toxicity Characteristic Leaching Procedure (TCLP).

A summary of the analytical results for constituents that were detected is provided on **Table 1**. Analytical data reports are provided in **Attachment B**.

Due to relatively small volume (approximately 45 cubic yards (in-place)) of soil anticipated to be generated from the excavations at the Railroad Ballast Cap in the Englewood Intermodal Yard area, in-situ soil samples for waste classification samples were not collected. Therefore, soils excavated from the Railroad Ballast Cap Area will be placed in lined roll-off boxes and waste classification soil samples will be collected once the soil is generated.

Data Evaluation

The soil analytical results were compared to the following criteria:

- HWPW Soil and Railroad Ballast Cap Area Samples (CA-01 through CA-06):
  - TCEQ Texas Risk Reduction Program (TRRP) Residential Protective Concentration Levels (PCLs);
  - TCEQ Texas-Specific Soil Background Concentrations (TSBCs); and
  - EPA Alternative Land Disposal Restriction (LDR) Treatment Standards for Contaminated Soil (ten times (10x) Universal Treatment Standards (UTS)) following 40 CFR §268.48 and 40 CFR §268.49.

- Soil Samples collected adjacent to HWPW Railroad Ballast Cap (SE-14 through SE-21) in the southwest portion of the HWPW area:
  - TCEQ TRRP Residential PCLs;
  - TCEQ TSBCs; and
  - TCEQ Guidance for the Classification and Coding of Industrial and Hazardous Wastes (RG-022, 02/05).

Analytical data were compared to the above standards to preliminarily evaluate for potential chemicals of concern (COCs) in soils within the Project Area. Soil data were conservatively compared to TCEQ TRRP Residential Assessment Levels (RALs) based on the lowest applicable human health Tier 1 Residential PCL and Class 1 groundwater (initially based on the conservative 30-acre source area values and then further evaluated using 0.5-acre PCLs if the 30-acre PCL was exceeded). Where a TSBC was applicable (i.e., arsenic, barium, lead, mercury, and selenium) and the published background concentration was higher than the applicable Residential PCL, the TSBC was used as the RAL for comparison to the analytical data. If soil sample data indicated concentrations above RALs, then recommendations for a soil management plan would be developed. Details of the soil evaluation using RALs and TSBCs for the two areas listed above are provided below.

HWPW Soil and Railroad Ballast Cap Area

The HWPW site, which is a TCEQ registered RCRA Permitted (Post-Closure Care) Facility, had been historically used for wood preserving operations. The planned construction activities in this area will likely encounter soils previously impacted from the wood preserving operations based on environmental sampling that had been conducted in this area. As a result, soils generated from this area where either solid waste management units (SWMUs) or areas of concern (AOCs) have been previously identified as used to manage wastes[1] will need to be classified as containing listed hazardous waste (F034/K001) (unless otherwise demonstrated with TCEQ approval) and will be restricted to off-site disposal only. Soil borings installed at locations CA-01 and CA-06 encountered heavily stained soils along with non-aqueous phase liquid (NAPL) observed within the soils. Analytical results from the soil samples collected from the HWPW Cap Area (CA-01 through CA-06) were compared to the TCEQ TRRP Residential PCLs and EPA Alternative Land Disposal Restriction (LDR) Treatment Standards for Contaminated Soil (ten times (10x) Universal Treatment Standards (UTS)) following 40 CFR §268.48 and 40 CFR §268.49 to further evaluate waste characterization and potential treatment requirements for disposal of soils once generated.

BTEX

BTEX was detected above the SDLs in nine samples collected from the Project Area. However, none of the reported BTEX concentrations exceeded their respective TRRP RALs, based on TRRP 30-acre Residential $^{GW}Soil_{Ing}$ PCLs.

[1] PRC Environmental Management, Inc. (PRC), 1993. *RCRA Facility Assessment Report, Southern Pacific Transportation Company, Houston, Texas, TXD 000820266.* October.

SVOCs

Of the SVOCs analyzed, 21 SVOCs were detected above their respective sample detection limits (SDLs). However, none of the concentrations were reported above their respective TRRP 30-acre Residential PCLs. In addition, 19 SVOCs from the 10 soil samples collected in the Cap Area had adjusted SDLs above the TRRP Tier 1 Residential PCLs, however, none of these SVOCs were detected above their adjusted SDLs.

In addition, none of the reported concentrations of SVOCs were detected above the 10x UTSs for F034/K001. Based on these results, soils to be generated from Cap Areas appear to meet the LDR alternative soil treatment standards (40 CFR 268.49(c)(1)) and will likely not require treatment prior to disposal at a UPRR approved TCEQ permitted disposal facility.

TPH

TPH was detected above the SDLs in the C_6-C_{12}, >C_{12}-C_{28} and >C_{28}-C_{35} ranges in eight samples collected from the Project Area. Soil samples with TPH concentrations above TRRP RALs, based on TRRP 30-acre Residential $^{GW}Soil_{Ing}$ PCLs, are summarized below:

Sample Location	TPH C_6-C_{12} (mg/kg)	TPH >C_{12}-C_{28} (mg/kg)	TPH >C_{28}-C_{35} (mg/kg)	Total TPH (mg/kg)
TRRP RALs (30 ac/0.5 ac)	*33/65*	*99/200*	*99/200*	*1,500**
CA-01 (5-8)	<18.7	125	25.6	150
CA-02 (0-2)	122	1,770	629	2,520
CA-06 (5-8)	24	267	26	317

Note: 30 ac = TRRP 30-acre Residential $^{GW}Soil_{Ing}$ PCL; 0.5 ac = TRRP 0.5-acre Residential $^{GW}Soil_{Ing}$ PCL
* = Total TPH was compared to *TCEQ Guidance for the Classification and Coding of Industrial and Hazardous Wastes (RG-022, 02/05)*

Each of the highlighted TPH range concentrations listed above exceeded both the TRRP 30-acre Residential $^{GW}Soil_{Ing}$ PCL and the TRRP 0.5-acre Residential $^{GW}Soil_{Ing}$ PCL. However, none of the TPH detections listed in the table above exceeded their respective Residential $^{Tot}Soil_{Comb}$ PCL.

Metals

Arsenic and lead were detected at concentrations that exceeded the higher of their respective TRRP RALs or TSBCs: arsenic (5.9 mg/kg) and lead (15 mg/kg), as detailed below:

- Arsenic was detected in nine samples collected from the Project Area at concentrations ranging from 1.51 J mg/kg to 9.81 mg/kg. Two samples had reported concentrations above the TRRP RAL (based on TSBC) of 5.9 mg/kg, however, none of the reported concentration exceeded the TRRP Residential $^{Tot}Soil_{Comb}$ PCL of 24 mg/kg.

- Lead was detected in 10 samples collected from the Project Area at concentrations ranging from 7.63 mg/kg to 77.9 mg/kg. Six samples had reported concentrations above the TRRP RAL (based on TSBC) of 15 mg/kg, however, none of the reported concentration exceeded the TRRP Residential $^{Tot}Soil_{Comb}$ PCL of 500 mg/kg.

TCLP Metals

Barium was the only metal with TCLP results detected above the method quantitation limit (MQL) in the 10 samples collected from the Cap Area. TCLP barium was reported at concentrations ranging from 0.839 mg/L to 2.53 mg/L. None of the TCLP barium results exceeded EPA Maximum Concentration of Contaminant for the Toxicity Characteristics of 100.0 mg/L, the TCEQ Class 1 Toxic Constituents' Maximum Leachable Concentrations (MLCs) of 100.0 mg/L, or the 10x UTS of 210.0 mg/L for barium.

Soils Adjacent to the Railroad Ballast Cap

VOCs

Of the VOCs analyzed, 8 VOCs were detected above the SDLs in the 8 soil samples collected from the Project Area. However, none of those VOCs were detected with reported concentrations above their respective TRRP RALs (based on TRRP Residential 30-acre $^{GW}Soil_{Ing}$ PCL).

SVOCs

Of the SVOCs analyzed, 17 SVOCs were detected above the SDLs in 8 soil samples collected from the Project Area. However, none of those SVOCs were not detected with reported concentrations above their respective TRRP RALs (based on TRRP Residential 30-acre $^{GW}Soil_{Ing}$ PCL).

TPH

TPH was detected above the SDLs in the $>C_{12}$-C_{28} and $>C_{28}$-C_{35} ranges in two samples collected from the Project Area. However, as with the VOCs and SVOCs, none of the reported TPH concentrations exceeded their respective TRRP RALs, based on TRRP 30-acre Residential $^{GW}Soil_{Ing}$ PCLs.

Metals

Six metals were detected at concentrations that exceeded the higher of their respective TRRP RALs or TSBCs: arsenic (5.9 mg/kg), barium (300 mg/kg), cadmium (0.75 mg/kg), lead (15 mg/kg), selenium (1.1 mg/kg), and silver (0.24 mg/kg), as detailed below:

- Arsenic was detected in eight samples collected from the Project Area at concentrations ranging from 3.33 mg/kg to 47.1 mg/kg. Seven samples had reported concentrations above the TRRP RAL (based on TSBC) of 5.9 mg/kg and three samples had reported arsenic concentrations above the TRRP Residential $^{Tot}Soil_{Comb}$ PCL of 24 mg/kg. However, none of the reported arsenic concentrations in the soil samples exceeded the TRRP Commercial/Industrial (C/I) $^{Tot}Soil_{Comb}$ PCL of 200 mg/kg.

  Soil samples SE-15 (0-0.5), SE-16 (0-0.5), and SE-20 (0-0.5) had arsenic concentrations reported above the TSBC of 5.9 mg/kg but below the TRRP Residential $^{Tot}Soil_{Comb}$ PCL and were therefore selected to be analyzed by SPLP for arsenic. Soil sample SE-21 (0-0.5) was selected for SPLP based on the preliminary analytical result of 22.7 mg/kg, however, the final reported concentration of 25.5 mg/kg exceeded the TRRP Residential $^{Tot}Soil_{Comb}$ PCL. The SPLP arsenic results are summarized below:

Sample Location	Total Arsenic (mg/kg)	SPLP Arsenic (mg/L)
SE-15 (0-0.5)	22.4	0.0368
SE-16 (0-0.5)	14	0.025
SE-20 (0-0.5)	14.3	0.0221

Sample Location	Total Arsenic (mg/kg)	SPLP Arsenic (mg/L)
SE-21 (0-0.5)	25.5	0.0371

The SPLP arsenic results highlighted above exceeded the TRRP Tier 1 $^{GW}GW_{ING}$ PCL of 0.01 mg/L and indicate that these arsenic concentrations from the top 0.5-foot of surface soils are potentially not protective of groundwater if the soils represented by these samples were located within a saturated zone.

The arsenic concentrations from SE-17 (0-0.5) and SE-19 (0-1) were reported above 36 mg/kg (equating to twenty times (20x) the TCEQ Class 1 Toxic Constituents' MLC of 1.8 mg/L). Therefore, the samples were selected to be analyzed for arsenic by Toxicity Characteristic Leaching Procedure (TCLP). The TCLP arsenic result is summarized below.

Sample Location	Total Arsenic (mg/kg)	TCLP Arsenic (mg/L)
SE-17 (0-0.5)	45.8	<0.100
SE-19 (0-1)	47.1	<0.100

The TCLP arsenic results did not exceed the EPA Maximum Concentration of Contaminant for the Toxicity Characteristics of 5.0 mg/L or the TCEQ Class 1 Toxic Constituents' MLC of 1.8 mg/L for arsenic. Based on the arsenic results from the samples analyzed for TCLP soils from the area represented by the aforementioned samples would likely be classified as Class 2 nonhazardous industrial waste (once generated)

- Barium was detected above the TRRP RAL (based on TSBC) of 300 mg/kg and the TRRP 0.5-acre Residential $^{GW}Soil_{Ing}$ PCL of 440 mg/kg in four samples collected from the Project Area at reported concentrations ranging from 491 mg/kg (SE-16 (0-0.5)) to 1,030 mg/kg (SE-17 (0-0.5)). However, none of the reported concentrations exceeded the TRRP 0.5-acre Residential $^{Tot}Soil_{Comb}$ PCL of 8,100 mg/kg.

  The barium concentrations from SE-15 (0-0.5), and SE-16 (0-0.5) were reported above the TRRP Residential PCL of 440 mg/kg and were therefore selected to be analyzed by SPLP for barium. The SPLP barium results are summarized below:

Sample Location	Total Barium (mg/kg)	SPLP Barium (mg/L)
SE-15 (0-0.5)	563	0.247
SE-16 (0-0.5)	491	0.199

  The SPLP barium results did not exceed the TRRP Tier 1 $^{GW}GW_{ING}$ PCL of 2.0 mg/L and indicate that the barium concentrations reported from the Project Area are protective of groundwater.

- Cadmium was detected above the TRRP RAL (30-acre Residential $^{GW}Soil_{Ing}$ PCL) of 0.75 mg/kg in six samples at reported concentrations ranging from 0.869 mg/kg (SE-15 (0-0.5)) to 2.93 mg/kg (SE-17 (0-0.5)). Only two of those samples (SE-17 (0-0.5) and SE-19 (0-1)) had reported cadmium concentrations that exceeded the TRRP Residential 0.5-acre $^{GW}Soil_{Ing}$ PCL of 1.5 mg/kg. None of the reported concentrations of cadmium exceeded the TRRP 0.5-acre Residential $^{Tot}Soil_{Comb}$ PCL of 52 mg/kg. The soil samples from SE-17 and SE-19 were not selected to be analyzed for cadmium by SPLP because the soil

from these areas will be restricted to off-site disposal due to reported concentrations of other constituents (arsenic).

- Lead was detected above the TRRP RAL (based on TSBC) of 15 mg/kg in seven samples collected from the Project Area. Samples with detected concentrations of lead above the TSBC of 15 mg/kg ranged from 35.8 mg/kg (SE-18 (0-1.25)) to 633 mg/kg (SE-17 (0-0.5)). Additionally, sample SE-17 (0-0.5) was detected at a concentration that exceeded the TRRP Residential 30-acre $^{Tot}Soil_{Comb}$ PCL of 500 mg/kg. However, none of the detected lead concentrations exceeded the C/I $^{Tot}Soil_{Comb}$ PCL of 1,600 mg/kg.

  Soil sample SE-15 (0-0.5) had reported lead concentrations above the TRRP RAL (based on TSBC) of 15 mg/kg and was therefore selected to be analyzed by SPLP for lead. The SPLP lead results are summarized below:

Sample Location	Total Lead (mg/kg)	SPLP Lead (mg/L)
SE-15 (0-0.5)	80.2	0.1

  The SPLP lead results highlighted above exceeded the TRRP Tier 1 $^{GW}GW_{ING}$ PCL of 0.015 mg/L and indicate that these lead concentrations from the top 0.5-foot of surface soils are potentially not protective of groundwater if the soils represented by these samples were located within a saturated zone.

  Soil samples with lead concentrations reported above 30 mg/kg (equating to twenty times (20x) the TCEQ Class 1 Toxic Constituents' MLC of 1.5 mg/L) were selected to be analyzed for lead by TCLP. The TCLP results are summarized below:

Sample Location	Total Lead (mg/kg)	TCLP Lead (mg/L)
SE-15 (0-0.5)	80.2	<0.100
SE-16 (0-0.5)	76.6	<0.100
SE-17 (0-0.5)	633	<0.100
SE-18 (0-1.25)	35.8	<0.100
SE-19 (0-1)	112	<0.100
SE-20 (0-0.5)	44.5	<0.100
SE-21 (0-0.5)	60.2	<0.100

  The TCLP lead results from soil samples listed above did not exceed the EPA Maximum Concentration of Contaminant for the Toxicity Characteristics of 5.0 mg/L or the TCEQ Class 1 Toxic Constituents' MLC of 1.5 mg/L for lead. Based on the TCLP lead results from samples collected from the aforementioned soil sample locations, the soils from those areas would likely be classified as Class 2 nonhazardous industrial waste (once generated).

- Selenium was detected above the TRRP RAL (30-acre Residential $^{GW}Soil_{Ing}$ PCL) of 1.1 mg/kg in eight samples at reported concentrations ranging from 1.39 mg/kg (SE-18 (0-1.25)) to 3.07 mg/kg (SE-17 (0-0.5)). Samples SE-17 (0-0.5), SE-19 (0-1), and SE-21 (0-0.5) also had a reported selenium concentration that exceeded the TRRP Residential 0.5-acre $^{GW}Soil_{Ing}$ PCL of 2.3 mg/kg. However, none of the reported concentrations of selenium exceeded the TRRP 0.5-acre Residential $^{Tot}Soil_{Comb}$ PCL of 308 mg/kg.

The selenium concentration from SE-21 (0-0.5) was reported above the TRRP Residential PCL of 2.3 mg/kg and was therefore selected to be analyzed by SPLP for selenium. The SPLP selenium result is summarized below:

Sample Location	Total Selenium (mg/kg)	SPLP Selenium (mg/L)
SE-21 (0-0.5)	2.66	<0.00735

The SPLP selenium result did not exceed the TRRP Tier 1 $^{GW}GW_{ING}$ PCL of 0.05 mg/L and indicate that the selenium concentrations reported from the Project Area are protective of groundwater.

- Silver was detected above the TRRP RAL (30-acre Residential $^{GW}Soil_{Ing}$ PCL) of 0.24 mg/kg in one sample collected from the Project Area at reported concentration of 0.4 J mg/kg (SE-17 (0-0.5)). However, the reported concentration from SE-17 (0-0.5) did not exceeded the TRRP 0.5-acre $^{GW}Soil_{Ing}$ PCL of 2.3 mg/kg.

Conclusions

Based on this preliminary soil evaluation, the following conclusions were developed:

HWPW Soil and Railroad Ballast Cap Areas

SVOCs and Metals

Soils generated in the HWPW Soil and Railroad Ballast Cap Areas will be classified as listed hazardous waste (F034/K001) (unless otherwise demonstrated with TCEQ approval). None of the SVOCs, total metals, or TCLP metals results were detected above their respective UTSs for the samples collected in this area. Therefore, based on these results, soils generated from the HWPW Soil and Railroad Ballast Cap Areas will likely not require treatment prior to disposal at a UPRR approved TCEQ permitted disposal facility.

TPH

The TPH concentration reported in the >C_6-C_{12} range from soil sample CA-02 was detected above the TRRP 0.5-acre Residential $^{GW}Soil_{Ing}$ PCL of 65 mg/kg. The reported concentrations of the >C_{12}-C_{28} range from soil samples CA-02 and CA-06 were detected above the TRRP 0.5-acre Residential $^{GW}Soil_{Ing}$ PCL of 200 mg/kg. In addition, the reported concentration of the >C_{28}-C_{35} range from soil samples CA-02 was detected above the TRRP 0.5-acre Residential $^{GW}Soil_{Ing}$ PCL of 200 mg/kg. However, based on the elevated TPH concentrations from CA-02 and the visual observations in the field, heavy contamination is anticipated to be encountered during excavation in the HWPW Cap Area.

Soils Adjacent to the Railroad Ballast Cap

VOCs and SVOCs

None of the reported VOCs and SVOCs concentrations in the soil samples collected within the Project Area exceeded their respective TRRP 30-acre RALs.

Metals

Of the six metals (arsenic, barium, cadmium, lead, selenium, and silver) that were detected at concentrations that exceeded the higher of their respective TRRP RALs or TSBCs, none were reported at concentrations exceeding their respective TRRP Residential $^{Tot}Soil_{Comb}$ PCLs.

Arsenic and lead detections equating to twenty times (20x) the TCEQ Class 1 Toxic Constituents' MLCs were selected for TCLP analysis. None of the soil sample TCLP metals results exceeded the EPA Maximum Concentrations of Contaminants for the Toxicity Characteristics or the TCEQ Class 1 Toxic Constituents' MLCs respectively. Based on the TCLP metals results, if the soils from the Project Area would likely be classified as non-hazardous Class 2 industrial waste (once generated).

Soil Management Plan

Based on these conclusions, soil disturbed as part of the Engineering North Bypass Project will managed as follows:

HWPW Soil and Railroad Ballast Cap Area

Based on the engineering design plan, approximately 2,761 cubic yards (in-place) of soil is anticipated to be generated from this area. The exact volume of soil generated may vary pending field conditions. Soils generated within the Project Area located in the HWPW Soil and Railroad Ballast Cap Areas will be restricted to off-site disposal and conservatively classified as containing listed hazardous waste (F034/K001) based on the soil samples CA-01 through CA-06. Soils generated must either be direct-loaded or placed into lined roll-off boxes (for small volumes generated during minor soil disturbances (e.g., power pole installation)) for off-site disposal at a UPRR approved TCEQ permitted landfill facility. The waste classification (based on in-situ sample data) and the proposed direct-loading of the soils for off-site disposal was approved by the TCEQ during the August 12, 2021 telephone call, which supersedes the *Comments on the Englewood Yard – North Bypass Soil Management Plan (SMP)* letter from the TCEQ dated August 10, 2021.

Soils Adjacent to the Railroad Ballast Cap (east of Waco Street)

Approximately 508 cubic yards (in-place) of soil based on the engineering design plan will be generated from this area. Using the soil sample data from the eight soil samples (approximately one sample per 64 cubic yards of soil) collected at SE-14 through SE-21, soils generated adjacent to the Railroad Ballast Cap (east of Waco Street) as part of the Project Area will likely be classified as non-hazardous Class 2 industrial waste. The soils generated will be disposed of off-site at a UPRR approved TCEQ permitted landfill facility.

Railroad Ballast Cap at the Englewood Intermodal Yard

Based on the engineering design plans, approximately 45 cubic yards (in-place) of soil will be generated from the construction activities from the Railroad Ballast Cap at the Englewood Intermodal Yard will be placed into lined roll-off boxes pending disposal at a UPRR approved TCEQ permitted landfill facility. Soil samples for waste classification will be collected once the soils are generated. One 5-point composite soil sample will be collected from each roll-off box and analyzed for the following analysis for waste characterization:

- VOCs by SW-846 Method 8260;
- SVOCs by SW-846 Method 8270;
- TPH by Texas Method 1005;
- RCRA Metals by SW-846 Methods 6000/7000 series including TCLP; and
- pH by EPA Method 9045.

Soils generated from the Railroad Ballast Cap at the Englewood Intermodal Yard will be characterized, classified, and profiled for disposal at a UPRR approved TCEQ permitted landfill facility based on the comparison of the soil analytical data to the *Texas Commission on Environmental Quality (TCEQ) Guidance for the Classification and Coding of Industrial and Hazardous Wastes (RG-022, 02/05)*.

Previously Unidentified Hotspots

If impacted soil hotspots (e.g., heavily stained or NAPL saturated soils) not previously identified are encountered during construction activities, soil from these areas will be segregated, placed into lined roll-off boxes, and sampled for waste classification. One 5-point composite soil sample will be collected from each roll-off box and analyzed for the following analysis for waste characterization:

- VOCs by SW-846 Method 8260;
- SVOCs by SW-846 Method 8270;
- TPH by Texas Method 1005;
- RCRA Metals by SW-846 Methods 6000/7000 series including TCLP; and
- pH by EPA Method 9045.

Any soils generated from excavations of previously unknown hotspots will be characterized, classified, and profiled for disposal at a UPRR approved TCEQ permitted landfill facility based on the comparison of the soil analytical data to the *Texas Commission on Environmental Quality (TCEQ) Guidance for the Classification and Coding of Industrial and Hazardous Wastes (RG-022, 02/05)*.

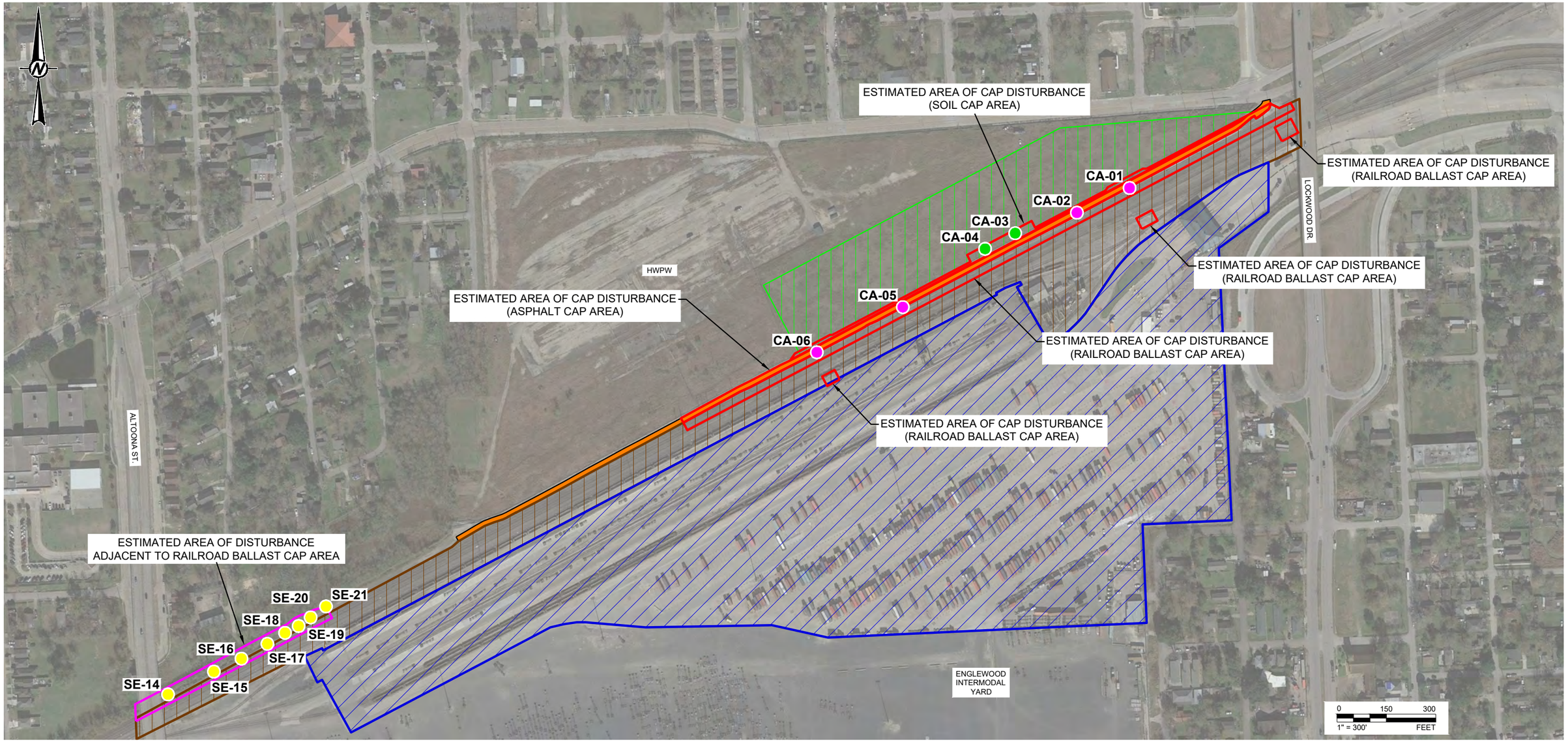
Table

Table 1
Summary of Soil Analytical Results
UPRR Houston, TX - Englewood Yard - North Bypass
Houston, Texas

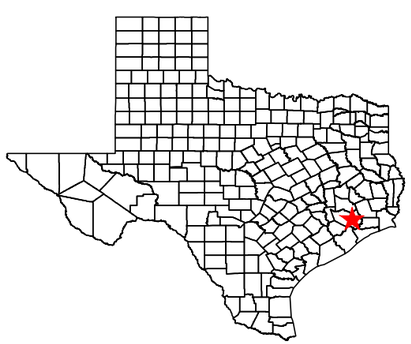
Sample Location	TRRP Tier 1 Residential Assessment Level (mg/Kg)	TRRP Tier1 Residential 0.5-acre PCL (mg/kg)	Texas Specifc Background Concentrations (mg/kg)	Universal Treatment Standard (10x)	SE-14	SE-15	SE-16	SE-17	SE-18	SE-19	SE-20	SE-21	CA-01	CA-01	CA-02	CA-03	CA-03	CA-04	CA-04	CA-05	CA-06	CA-06
Sample Depth (ft BGS)					0-0.5	0-0.5	0-0.5	0-0.5	0-1.25	0-1	0-0.5	0-0.5	0-5	5-8	0-2	0-1.5	1.5-1.67	0-1.5	1.5-1.62	0-2	0-5	5-8
Station Number					1073+75	1075+25	1076+00	1077+00	1077+50	1078+00	1078+50	1079+00	1106+90	1106+90	1105+00	1103+20	1103+20	1102+05	1102+05	1099+00	1096+00	1096+00
Sample Date					1/27/2021	1/27/2021	1/27/2021	1/27/2021	1/27/2021	1/27/2021	1/27/2021	1/27/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
RCRA Metals																						
ARSENIC	2.5	5	5.9	--	3.33	22.4	14	45.8	8.25	47.1	14.3	25.5	1.53 J	6.36	9.81	1.51 J	4.38	4.21	<0.576	1.64 J	2.51 J	1.75 J
SPLP ARSENIC (mg/L)	0.01		--		--	0.0368	0.025	--	--	--	0.0221	0.0371	--	--	--	--	--	--	--	--	--	--
TCLP ARSENIC (mg/L)	1.80	5.0	--	50.0	--	--	--	<0.100	--	<0.100	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
BARIUM	220	440	300	--	165	563	491	1030	199	514	197	296	--	--	--	--	--	--	--	--	--	--
SPLP BARIUM (mg/L)	2.0		--		--	0.247	0.199	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP BARIUM (mg/L)	100.0	100.0	--	210.0	--	--	--	--	--	--	--	--	2.51	2.53	1.44	1.4	1.5	2.02	0.958	0.839	1.18	2.26
CADMIUM	0.75	1.5	--	--	0.312 J	0.869	1.31	2.93	0.456 J	2.24	0.873	1.26	--	--	--	--	--	--	--	--	--	--
TCLP CADMIUM (mg/L)	0.5	1.0	--	11.0	--	--	--	--	--	--	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
CHROMIUM	1200	2400	30	--	15.5	20.8	76.1	55.9	19.1	31.8	23.6	73.6	14.3	15.7	17.6	8.96	14.8	8.55	14.4	10.1	14.1	18.4
TCLP CHROMIUM (mg/L)	5	5.0	--	60.0	--	--	--	--	--	--	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
LEAD	1.5	3	15	--	7.8	80.2	76.6	633	35.8	112	44.5	60.2	21.1	37.6	77.9	7.63	26.3	10.7	41.7	10.2	23.1	8.8
SPLP LEAD (mg/L)	0.015		--		--	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TCLP LEAD (mg/L)	1.5	5.0	--	75.0	--	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
SELENIUM	1.1	2.3	0.3	--	1.91 J	1.88 J	2 J	3.07	1.39 J	2.8	1.85 J	2.66	--	--	--	--	--	--	--	--	--	--
SPLP SELENIUM (mg/L)	0.05		--		--	--	--	--	--	--	--	<0.00735	--	--	--	--	--	--	--	--	--	--
TCLP SELENIUM (mg/L)	1.0	1.0	--	57.0	--	--	--	--	--	--	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
SILVER	0.24	0.48	--	--	<0.160	<0.135	<0.141	0.4 J	<0.151	0.184 J	<0.139	<0.143	--	--	--	--	--	--	--	--	--	--
TCLP SILVER (mg/L)	1.0	1.0	--	14.0	--	--	--	--	--	--	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
MERCURY	1	2.1	0.04	--	<0.0226	0.0334 J	0.0588	0.22	0.023 J	0.135	0.0444	0.0458	--	--	--	--	--	--	--	--	--	--
TCLP MURCURY (mg/L)	0.2	0.2	--	2.5	--	--	--	--	--	--	--	--	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
TPH																						
TPH C6 - C12	33	65	--	--	<19.2	<16.0	<16.7	<16.3	<17.8	<16.5	<16.4	<16.9	<19.3	<18.7	122	<17.8	<17.1	<18.3	<16.7	<17.9	<19.6	24
TPH C12 - C28	99	200	--	--	<19.2	<16.0	<16.7	<16.3	<17.8	67.7	<16.4	36.9 J	22.8	125	1770	92.5	46.9	<18.3	50.6	<17.9	50.3	267
TPH C28 - C35	99	200	--	--	<19.2	<16.0	<16.7	<16.3	<17.8	88.3	<16.4	65.7	<19.3	25.6	629	46.5	42.1	<18.3	49.7	<17.9	<19.6	26
TPH C6 - C35	1500	--	--	--	<19.2	<16.0	<16.7	<16.3	<17.8	156	<16.4	103	22.8 J	150	2520	139	89.1	<18.3	100	<17.9	50.3 J	317
VOCs																						
BENZENE	0.013	0.026	--	--	<0.000723	<0.000538	<0.000775	<0.000575	<0.000673	<0.000585	<0.000585	<0.000599	<0.000667	<0.000699	<0.000607	<0.000641	0.000767 J	<0.000671	<0.000571	<0.000624	0.000766 J	<0.000738
ETHYLBENZENE	3.8	7.6	--	--	<0.00114	<0.000849	0.00166 J	<0.000907	<0.00106	<0.000923	<0.000923	<0.000946	0.00125 J	0.00326 J	0.0333	<0.00101	0.0111	<0.00106	0.00591	0.00187 J	0.0913	0.00632
ISOPROPYLBENZENE	170	350	--	--	<0.000658	<0.000489	0.00689	<0.000523	<0.000613	0.00063 J	0.000626 J	0.000573 J	--	--	--	--	--	--	--	--	--	--
P-ISOPROPYLTOLUENE	120	230	--	--	<0.00395	<0.00294	<0.00423	<0.00314	<0.00368	<0.00319	<0.00319	<0.00327	--	--	--	--	--	--	--	--	--	--
2-BUTANONE (MEK)	15	29	--	--	0.0986 J	<0.0731	<0.105	<0.0782	<0.0915	<0.0795	<0.0795	<0.0815	--	--	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	0.0065	0.013	--	--	<0.0103	<0.00765	<0.0110	<0.00817	<0.00957	<0.00832	<0.00831	<0.00852	--	--	--	--	--	--	--	--	--	--
NAPHTHALENE	16	31	--	--	<0.00755	<0.00562	0.0183 J	<0.00601	<0.00703	0.0197	0.00666 J	<0.00626	--	--	--	--	--	--	--	--	--	--
N-PROPYLBENZENE	22	45	--	--	<0.00147	<0.00109	<0.00158	<0.00117	<0.00137	<0.00119	<0.00119	<0.00122	--	--	--	--	--	--	--	--	--	--
STYRENE	1.6	3.3	--	--	<0.000354	0.000302 J	0.00124 J	<0.000282	0.000369 J	0.00137 J	0.001 J	0.000365 J	--	--	--	--	--	--	--	--	--	--
TOLUENE	4.1	8.2	--	--	<0.00201	<0.00150	<0.00216	<0.00160	<0.00187	<0.00163	<0.00163	<0.00167	0.00279 J	0.00446 J	0.0277	0.00638 J	0.0167	<0.00187	0.0157	0.00338 J	0.00915	0.0036 J
1,2,4-TRIMETHYLBENZENE	16	33	--	--	<0.00245	<0.00182	0.00377 J	<0.00194	<0.00228	<0.00198	<0.00198	0.00266	--	--	--	--	--	--	--	--	--	--
XYLENES, TOTAL	61	120	--	--	<0.00136	0.00217 J	0.00984 J	0.00426 J	0.00441 J	0.00346 J	0.00159 J	0.00338 J	0.00837 J	0.00985	0.152	0.00124 J	0.0281	<0.00126	0.0333	0.0125	0.881	0.0869
SVOCs																						
ACENAPHTHENE	120	240	--	34.0	<0.00678	0.0153 J	<0.0600	<0.0586	<0.00639	<0.237	<0.0589	<0.0607	0.0254 J	4.62	0.321	0.0068 J	<0.00614	<0.00656	<0.00599	<0.00630	11	7.75
ACENAPHTHYLENE	200	410	--	34.0	<0.00590	0.107	0.177 J	0.112 J	0.0685	0.769 J	0.396	0.313 J	0.0138 J	0.0759	0.0592 J	<0.00556	0.0497	<0.00571	0.0671	<0.00548	0.281 J	0.137
ANTHRACENE	3400.0	6900.0	--	34.0	<0.00746	0.132	0.197 J	0.189 J	0.222	1.26 J	0.612	1.14	0.0373 J	3.37	0.282	0.0105 J	0.234	<0.00722	0.173	<0.00693	6.95	4.4
BENZO(A)ANTHRACENE	65.0	130.0	--	34.0	<0.00738	0.235	0.43	0.195 J	0.13	0.865 J	0.385	0.628	0.0862	3.75	0.344	0.0273 J	0.0616	0.00756 J	0.08	<0.00886	4.1	2.5
BENZO(B)FLUORANTHENE	220	440	--	68.0	<0.00781	0.616	1.57	0.712 J	0.43	5.6	1.68	1.36	0.142	1.56	0.601	0.0552	0.781	0.0199 J	0.496	<0.00726	2.02	1.11
BENZO(K)FLUORANTHENE	2200	4500	--	68.0	<0.00744	0.156	0.424	0.227 J	0.126	1.26 J	0.483	0.427	0.0437	0.468	0.186	0.0159 J	0.23	<0.00721	0.118	<0.00692	0.665	0.428
BENZO(G,H,I)PERYLENE	23000	46000	--	18.0	<0.00766	0.274	0.355 J	0.241 J	0.277	1.6	0.624	1.58	0.0444	0.105	0.0621 J	0.0148 J	0.0756	0.0206 J	0.068	<0.00712	0.0892	0.0542
BENZO(A)PYRENE	3.8	7.6	--	34.0	<0.00778	0.298	0.662	0.32 J	0.193	2.52	0.784	0.701	0.067	0.785	0.229	0.0217 J	0.205	0.00989 J	0.167	<0.00723	0.971	0.579
CARBAZOLE	2.3	4.6	--	--	<0.0130	0.0764 J	<0.115	<0.112	0.0827 J	0.757 J	0.23 J	0.188 J	0.0155 J	0.113 J	0.101 J	<0.0122	0.0245 J	<0.0125	0.0209 J	<0.0120	<0.135	2.64 J
CHRYSENE	5600	11000	--	34.0	<0.00832	0.317	0.483	0.307 J	0.14	0.756 J	0.461	0.535	0.113	3.42	0.391	0.0281 J	0.174	<0.00806	0.0387	<0.00773	3.5	2.11
DIBENZ(A,H)ANTHRACENE	7.6	15	--	82.0	<0.0116	0.0416 J	<0.103	<0.201	0.0234 J	<0.407	0.119 J	0.158 J	<0.0112	0.0445	<0.0213	<0.0109	0.0229 J	<0.0112	0.018 J	<0.0108	0.04 J	0.0277 J
DIBENZOFURAN	17	33	--	--	<0.0137	<0.0232	<0.121	<0.118	<0.0129	<0.480	<0.119	<0.123	<0.0132	1.77	0.171 J	<0.0129	<0.0124	<0.0133	<0.0121	<0.0127	8.54	6.01
FLUORANTHENE	960	1900	--	34.0	<0.00756	0.41	0.521	0.312 J	0.192	1.1 J	0.449	0.834	0.254	17.9	2.25	0.126	0.252	0.0114 J	0.119	<0.00702	25.5	14.1
FLUORENE	150	300	--	34.0	<0.00682	<0.0115	<0.0603	<0.0589	0.00828 J	<0.239	<0.0593	<0.0611	0.0194 J	5.16	0.339	0.00658 J	0.00686 J	<0.00660	<0.00603	<0.00633	12.5	8.68
INDENO(1,2,3-CD)PYRENE	630	1300	--	34.0	<0.0118	0.196	0.322 J	<0.205	0.125	1.24 J	0.529	0.657	0.0464	0.159	0.0733 J	0.0148 J	0.0907	0.0151 J	0.0937	<0.0110	0.131	0.0851
2-METHYLNAPHTHALENE	8.5	17	--	--	<0.00543	0.0115 J	<0.0481	<0.0470	0.00611 J	<0.190	<0.0472	<0.0487	0.00647 J	0.397	0.0619 J	0.00536 J	<0.00492	<0.00526	<0.00480	<0.00505	8.23	5.74
NAPHTHALENE	16	31	--	56.0	<0.0105	<0.0178	<0.0930	<0.0909	<0.00991	<0.368	<0.0914	<0.0942	0.0166 J	0.0367 J	0.105	<0.00992	<0.00952	<0.0102	<0.00929	<0.00977	7.93	11.4
PHENANTHRENE	210	420	--	56.0	<0.00831	0.171	0.105 J	<0.0719	0.037 J	<0.291	<0.0723	0.179 J	0.121	19.9	1.9	0.0587	0.0171 J	<0.00805	0.0208 J	<0.00772	48.6	32.4
BENZYLBUTYL PHTHALATE	130	260	--	--	<0.0131	<0.0222	<0.116	<0.113	<0.0123	<0.458	<0.114	<0.117	<0.0126	<0.0130	<0.0239	<0.0123	<0.0118	<0.0127	<0.0116	<0.0122	<0.0136	<0.0134
BIS(2-ETHYLHEXYL)PHTHALATE	82	160	--	--	<0.0531	<0.0899	<0.470	<0.459	<0.0500	<1.86	<0.461	<0.476	<0.0512	0.0687 J	<0.0971	<0.0501	<0.0481	<0.0514	<0.0469	<0.0493	<0.0551	<0.0544
PYRENE	560	1100	--	82.0	<0.00815	0.509	0.755	0.381	0.222	1.54	0.669	0.894	0.333	14.4	1.94	0.117	0.276	0.0128 J	0.179	<0.00757	15.9	9.95
pH																						
pH	--	--	--	--	--	--	--	--	8.45	--	--	8.9	--	--	--	--	--	--	--	--	--	--

Notes:
(1). TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Assessment level (RAL) based on lowest of Soil PCLs $^{GW}Soil_{ing}$ or $^{Tot}Soil_{Comb}$ (assuming 30 acre source area).
(2). SVOC and TCLP metal concentrations are compared to EPA Alternative Land Disposal Restriction (LDR) (ten times (10x) Universal Treatment Standards (UTS))
(3). Metal concentrations were compared to the higher of the TRRP Tier 1 PCL or the Texas-Specific Background Concentrations (TSBC).
(4). Total TPH was compared to TCEQ Guidance for the Classification and Coding of Industrial and Hazardous Wastes (RG-022, 02/05)
(5). Bolded concentrations represent reported detections (i.e. concentration is greater than the sample detection limit (SDL)).
(6). Constituent concentrations exceeding the higher of either the Critical PCL or TSBC have been highlighted in yellow.
(7). Constituent concentrations exceeding either their respective TSBC or TRRP RAL for 30-acre source area and below the TRRP RAL for 0.5 acre source area are highlighted in orange.
(8). J = Result is estimated due to a detected concentration that is less than the MQL but greater than or equal to the SDL.
(9). -- = Not Applicable / Not Analyzed.
(10). Only constituents having at least one detection greater than their respective SDL or method quantitative limit (MQL) are included within this table.
(11). Toxicity Characteristic Leaching Procedure (TCLP) concentrations are in mg/L and are compared to TCEQ Guidance for the Classification and Coding of Industrial and Hazardous Wastes (RG-022, 02/05).

Figure



KEY MAP



LEGEND

- SOIL CAP BORING LOCATION
- RAILROAD BALLAST CAP BORING LOCATION
- ADJACENT TO RAILROAD BALLAST CAP BORING LOCATION
- RAILROAD BALLAST CAP AREA
- ASPHALT CAP AREA
- SOIL CAP
- CONCRETE CAP AREA
- ESTIMATED AREA OF CAP DISTURBANCE
- ESTIMATED AREA OF DISTURBANCE ADJACENT TO RAILROAD BALLAST CAP AREA

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 12/1/19.

CLIENT
UNION PACIFIC RAILROAD CO.

PROJECT
ENGLEWOOD YARD - NORTH BYPASS
HOUSTON, TEXAS

TITLE
HWPW SOIL AND RAILROAD BALLAST CAP AREA AND SOIL ADJACENT TO THE RAILROAD BALLAST CAP

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2021-04-15
DESIGNED	AJD
PREPARED	AJD
REVIEWED	AR
APPROVED	PM

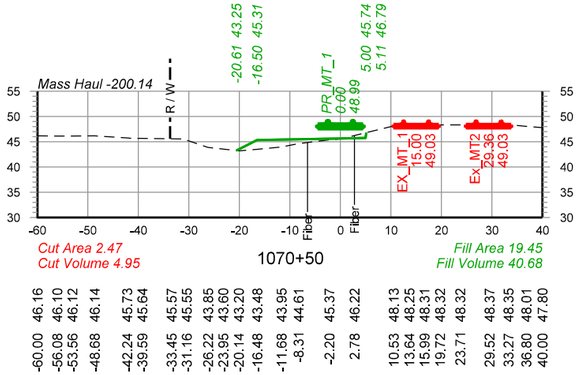
PROJECT NO. 20144747 | CONTROL | REV. 0 | FIGURE 1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

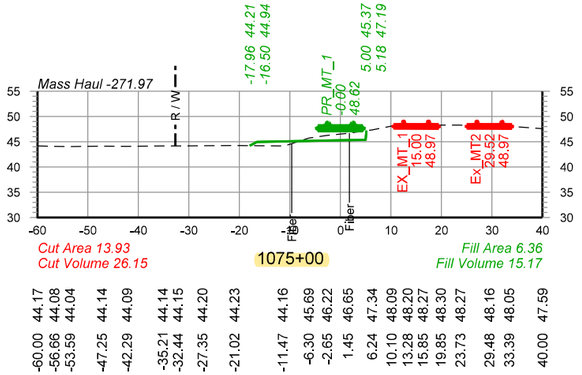
Path: \\Texarkana\Data\Projects - Round Rock_2020\20144747 - UPRR Englewood Yard North Bypass\PRODUCTION\2021-3\ | File Name: FIG 1 - HWPW Cap Areas.dwg | Last Edited By: adiamond Date: 2021-04-15 Time:4:21:25 PM | Printed By: adiamond Date: 2021-04-15 Time:4:22:21 PM

ATTACHMENT A

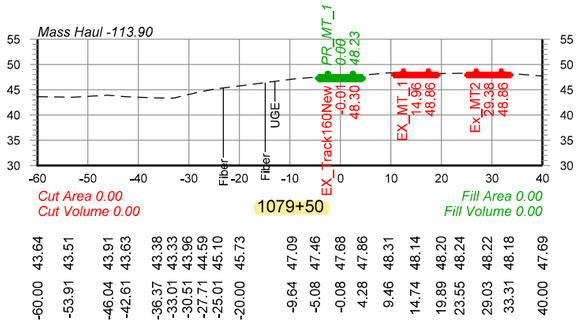
Design Plans Cross Sections


Mass Haul -200.14
-20.61 43.25
-16.50 45.31
5.00 45.74
5.11 46.79
PR_MT_1
0.00
48.99
EX_MT_1
15.00
49.03
Ex_MT2
29.36
49.03
R / W
Fiber
Fiber
Cut Area 2.47
Cut Volume 4.95
1070+50
Fill Area 19.45
Fill Volume 40.68

| | | |


Mass Haul -271.97
-17.96 44.21
-16.50 44.94
5.00 45.37
5.18 47.19
PR_MT_1
0.00
48.62
EX_MT_1
15.00
48.97
Ex_MT2
29.62
48.97
R / W
Fiber
Fiber
Cut Area 13.93
Cut Volume 26.15
1075+00
Fill Area 6.36
Fill Volume 15.17

| | | |


Mass Haul -113.90
PR_MT_1
0.00
48.23
EX_Track160New
0.01
48.30
EX_MT_1
14.96
48.86
Ex_MT2
29.38
48.86
Fiber
Fiber
UGE
Cut Area 0.00
Cut Volume 0.00
1079+50
Fill Area 0.00
Fill Volume 0.00

| | | |

ATTACHMENT B

Laboratory Analytical Reports

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 08, 2021

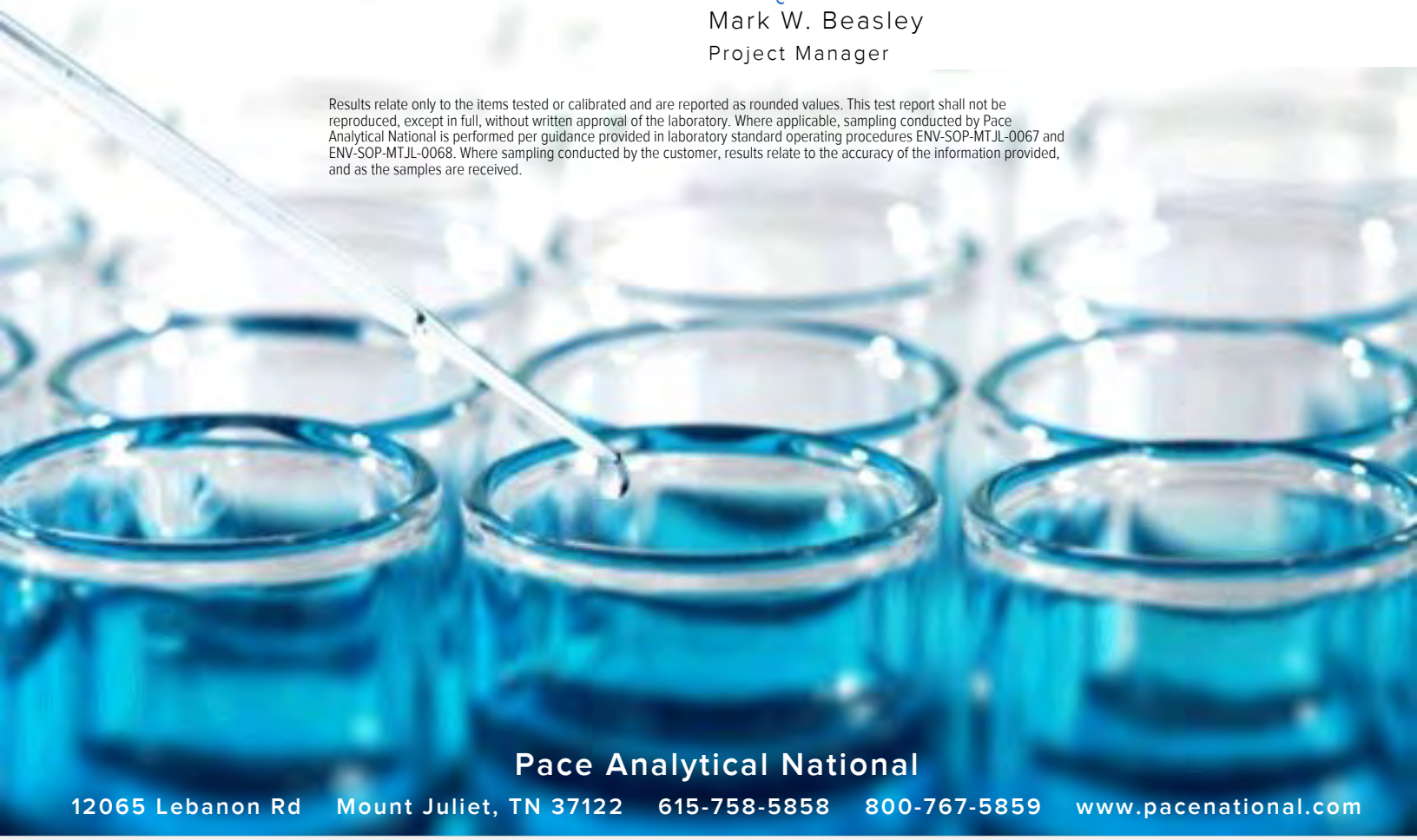
UPRR - Golder Associates

Sample Delivery Group:	L1311179
Samples Received:	01/28/2021
Project Number:	1712
Description:	Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North
Site:	SOIL EVALUATION
Report To:	Patrick Marty
	2201 Double Creek Dr., Ste 4004
	Round Rock, TX 78664

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SO-1712-SE06(0-1.25)-20210126 L1311179-01 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 16:40 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614562	1	02/02/21 16:05	02/02/21 16:16	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1614206	1	02/03/21 00:16	02/03/21 11:35	KPS	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:19	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 00:48	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613619	1.34	01/26/21 16:40	01/30/21 06:14	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1.37	02/02/21 04:29	02/02/21 23:03	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	1	02/01/21 10:07	02/01/21 19:03	AMG	Mt. Juliet, TN

SO-1712-SE02(0-3)-20210126 L1311179-02 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 14:15 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614562	1	02/02/21 16:05	02/02/21 16:16	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:26	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 00:51	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613619	1	01/26/21 14:15	01/30/21 06:33	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1	02/02/21 04:29	02/02/21 23:19	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	1	02/01/21 10:07	02/01/21 18:39	AMG	Mt. Juliet, TN

SO-1712-SE03(0-2-20210126 L1311179-03 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 14:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614562	1	02/02/21 16:05	02/02/21 16:16	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:12	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 00:54	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613619	1	01/26/21 14:35	01/30/21 06:53	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1	02/02/21 04:29	02/02/21 23:35	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	2	02/01/21 10:07	02/01/21 22:52	AMG	Mt. Juliet, TN

SO-1712-SE01(0-3)-20210126 L1311179-04 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 13:45 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614562	1	02/02/21 16:05	02/02/21 16:16	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:29	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 00:56	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613619	1.19	01/26/21 13:45	01/30/21 07:12	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1	02/02/21 04:29	02/02/21 23:50	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	1	02/01/21 10:07	02/01/21 19:28	AMG	Mt. Juliet, TN

SO-1712-SE13(0-0.5)-20210126 L1311179-05 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 10:15 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614562	1	02/02/21 16:05	02/02/21 16:16	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1614203	1	02/01/21 18:26	02/02/21 00:57	WOS	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:31	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 01:05	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613619	1	01/26/21 10:15	01/30/21 07:31	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1	02/02/21 04:29	02/03/21 00:04	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	1	02/01/21 10:07	02/01/21 19:52	AMG	Mt. Juliet, TN

SO-1712-SE07(0-4)-20210126 L1311179-06 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 12:05 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614562	1	02/02/21 16:05	02/02/21 16:16	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:34	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 01:07	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613619	1	01/26/21 12:05	01/30/21 07:50	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1	02/02/21 04:29	02/03/21 00:20	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	2	02/01/21 10:07	02/02/21 18:42	JNJ	Mt. Juliet, TN

SO-1712-SE11(0-1)-20210126 L1311179-07 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 09:50 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:36	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 01:10	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613619	1.53	01/26/21 09:50	01/30/21 08:09	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1.36	02/02/21 04:29	02/03/21 00:34	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	1	02/01/21 10:07	02/01/21 20:17	AMG	Mt. Juliet, TN

SO-1712-SE05(0-1)-20210126 L1311179-08 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 15:45 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1614203	1	02/01/21 18:26	02/02/21 00:57	WOS	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:38	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 01:13	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1	01/26/21 15:45	01/30/21 05:32	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1	02/02/21 04:29	02/03/21 00:48	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	1	02/01/21 10:07	02/01/21 20:41	AMG	Mt. Juliet, TN

SO-1712-SE08(0-2)-20210126 L1311179-09 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 11:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:41	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 01:16	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1.46	01/26/21 11:35	01/30/21 05:51	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1.52	02/02/21 04:29	02/03/21 01:03	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614392	2	02/01/21 10:07	02/02/21 19:03	JNJ	Mt. Juliet, TN

SO-1712-SE12(0-0.5)-20210126 L1311179-10 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 10:00 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:43	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613801	1	01/30/21 08:33	02/03/21 01:19	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1	01/26/21 10:00	01/30/21 06:10	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1614595	1	02/02/21 04:29	02/03/21 01:18	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	5	02/02/21 08:13	02/03/21 01:02	AMG	Mt. Juliet, TN

SO-1712-SE10(0-0.5)-20210126 L1311179-11 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 10:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1614203	1	02/01/21 18:26	02/02/21 00:57	WOS	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:46	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:24	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1	01/26/21 10:35	01/30/21 06:29	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 17:49	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	1	02/02/21 08:13	02/02/21 23:59	AMG	Mt. Juliet, TN

SO-1712-SE09(0-0.5)-20210126 L1311179-12 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 11:10 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:48	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:27	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1.56	01/26/21 11:10	01/30/21 06:48	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1.65	02/03/21 04:42	02/03/21 18:05	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	1	02/02/21 08:13	02/02/21 22:55	AMG	Mt. Juliet, TN

SO-1712-SE04(0-0.5)-20210126 L1311179-13 Solid

Collected by: JE/WC | Collected date/time: 01/26/21 15:15 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:55	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:35	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1	01/26/21 15:15	01/30/21 07:07	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 18:20	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	1	02/02/21 08:13	02/02/21 23:38	AMG	Mt. Juliet, TN

SO-1712-SE24(0-1)-20210127 L1311179-14 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 13:20 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1614203	1	02/01/21 18:26	02/02/21 00:57	WOS	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 09:57	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:38	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1	01/27/21 13:20	01/30/21 07:26	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 18:36	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	5	02/02/21 08:13	02/03/21 02:06	AMG	Mt. Juliet, TN

SO-1712-SE22(0-2)-20210127 L1311179-15 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 12:30 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 10:00	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:41	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1	01/27/21 12:30	01/30/21 07:46	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 21:11	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	5	02/02/21 08:13	02/03/21 01:45	AMG	Mt. Juliet, TN

SO-1712-SE20(0-0.5)-20210127 L1311179-16 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 11:00 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614563	1	02/03/21 14:36	02/03/21 14:57	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 10:02	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:43	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1.06	01/27/21 11:00	01/30/21 08:05	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 18:52	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	10	02/02/21 08:13	02/03/21 02:27	ADF	Mt. Juliet, TN

SO-1712-SE21(0-0.5)-20210127 L1311179-17 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 11:10 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1614203	1	02/01/21 18:26	02/02/21 00:57	WOS	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 10:04	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:08	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613622	1	01/27/21 11:10	01/30/21 08:24	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 21:42	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1614577	10	02/02/21 08:13	02/03/21 02:48	ADF	Mt. Juliet, TN

SO-1712-SE15(0-0.5)-20210127 L1311179-18 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 08:55 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 10:07	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:46	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613623	1	01/27/21 08:55	01/30/21 17:37	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 19:07	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	2	02/05/21 00:34	02/05/21 17:52	KME	Mt. Juliet, TN

SO-1712-SE19(0-1)-20210127 L1311179-19 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 09:55 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 10:09	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:49	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613623	1	01/27/21 09:55	01/30/21 17:56	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615753	1	01/27/21 09:55	02/03/21 20:08	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 21:58	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	40	02/05/21 00:34	02/05/21 20:24	KME	Mt. Juliet, TN

SO-1712-SE23(0-0.5)-20210127 L1311179-20 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 12:40 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614236	1	02/02/21 10:12	02/03/21 10:12	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:52	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613623	1	01/27/21 12:40	01/30/21 18:14	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1615753	1	01/27/21 12:40	02/03/21 20:27	DWR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 19:23	TJD	Mt. Juliet, TN

SO-1712-SE23(0-0.5)-20210127 L1311179-20 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 12:40 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	2	02/05/21 00:34	02/05/21 18:16	KME	Mt. Juliet, TN

SO-1712-SE14(0-0.5)-20210127 L1311179-21 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 08:45 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614237	1	02/01/21 17:29	02/02/21 12:11	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:54	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613623	1	01/27/21 08:45	01/30/21 18:33	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1.02	02/03/21 04:42	02/03/21 19:38	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	1	02/05/21 00:34	02/05/21 15:51	KME	Mt. Juliet, TN

SO-1712-SE16(0-0.5)-20210127 L1311179-22 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 09:05 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614237	1	02/01/21 17:29	02/02/21 12:18	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 19:57	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613623	1.39	01/27/21 09:05	01/30/21 18:52	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 19:54	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	10	02/05/21 00:34	02/05/21 19:05	KME	Mt. Juliet, TN

SO-1712-SE18(0-1.25)-20210127 L1311179-23 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 09:40 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Wet Chemistry by Method 9045D	WG1614203	1	02/01/21 18:26	02/02/21 00:57	WOS	Mt. Juliet, TN
Mercury by Method 7471A	WG1614237	1	02/01/21 17:29	02/02/21 12:21	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 20:00	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613623	1	01/27/21 09:40	01/30/21 19:11	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 20:08	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	1	02/05/21 00:34	02/05/21 17:28	KME	Mt. Juliet, TN

SO-1712-SE17(0-0.5)-20210127 L1311179-24 Solid

Collected by: JE/WC | Collected date/time: 01/27/21 09:10 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1614564	1	02/03/21 14:58	02/03/21 15:44	KDW	Mt. Juliet, TN
Mercury by Method 7471A	WG1614237	1	02/01/21 17:29	02/02/21 12:23	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1613802	1	01/30/21 00:55	01/30/21 20:08	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613623	1	01/27/21 09:10	01/30/21 19:30	JHH	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1615114	1	02/03/21 04:42	02/03/21 21:26	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	10	02/05/21 00:34	02/05/21 18:41	KME	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1616776	20	02/05/21 00:34	02/05/21 20:50	KME	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

TB01-20210127 L1311179-25 GW

Collected by: JE/WC
Collected date/time: 01/27/21 00:00
Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613518	1	01/29/21 15:04	01/29/21 15:04	JAH	Mt. Juliet, TN

TB01-20210126 L1311179-26 GW

Collected by: JE/WC
Collected date/time: 01/26/21 00:00
Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1613518	1	01/29/21 15:25	01/29/21 15:25	JAH	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 02/08/2021 14:56
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1311179-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1613622, WG1613802, WG1614203, WG1614392, WG1614237, WG1613619, WG1613518, WG1613801, WG1614562, WG1614595, WG1614236, WG1614206, WG1613623, WG1614577, WG1615114, WG1615753, WG1614563, WG1614564 and WG1616776

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?		X			1
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			2
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		X			3
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			4
		Were MS/MSD RPDs within laboratory QC limits?		X			5
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 02/08/2021 14:56
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1311179-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1613622, WG1613802, WG1614203, WG1614392, WG1614237, WG1613619, WG1613518, WG1613801, WG1614562, WG1614595, WG1614236, WG1614206, WG1613623, WG1614577, WG1615114, WG1615753, WG1614563, WG1614564 and WG1616776

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]

1. Items identified by the letter “R” must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter “S” should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National	LRC Date: 02/08/2021 14:56
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1311179-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1613622, WG1613802, WG1614203, WG1614392, WG1614237, WG1613619, WG1613518, WG1613801, WG1614562, WG1614595, WG1614236, WG1614206, WG1613623, WG1614577, WG1615114, WG1615753, WG1614563, WG1614564 and WG1616776

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?		X			6
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
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Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 02/08/2021 14:56
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1311179-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1613622, WG1613802, WG1614203, WG1614392, WG1614237, WG1613619, WG1613518, WG1613801, WG1614562, WG1614595, WG1614236, WG1614206, WG1613623, WG1614577, WG1615114, WG1615753, WG1614563, WG1614564 and WG1616776

ER #[1]	Description
1	9045D WG1614203 L1311179-05, 08, 11, 14, 17 and 23: Prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values. 9045D WG1614206 L1311179-01: Prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
2	8270C WG1616776 2,4,6-Tribromophenol, 2-Fluorobiphenyl, 2-Fluorophenol, Nitrobenzene-d5, p-Terphenyl-d14, Phenol-d5 L1311179-19 and 24: Percent Recovery is outside of established control limits.
3	8260B WG1613619 1,3-Dichloropropane, 1,1,2,2-Tetrachloroethane: Percent Recovery is outside of established control limits. 8260B WG1613622 trans-1,2-Dichloroethene, 1,1,1-Trichloroethane, Trichloroethene: Percent Recovery is outside of established control limits. 8260B WG1613623 Acetone, Bromochloromethane: Percent Recovery is outside of established control limits. 8260B WG1613518 Acrolein, 1,2,3-Trimethylbenzene: Percent Recovery is outside of established control limits.
4	8260B WG1613622 Chloroethane, 1,1-Dichloroethene, Toluene: Percent Recovery is outside of established control limits. 8270C WG1614392 Pyridine: Percent Recovery is outside of established control limits. 8270C WG1616776 Hexachlorocyclopentadiene, n-Nitrosodimethylamine, Dimethyl phthalate, Pyridine, Benzoic Acid, 4,6-Dinitro-2-methylphenol, 2,4-Dinitrophenol: Percent Recovery is outside of established control limits. 6010B WG1613801 Barium: Percent Recovery is outside of established control limits. 6010B WG1613802 Barium, Lead: Percent Recovery is outside of established control limits.
5	8260B WG1613619 Benzene, Bromobenzene, Bromodichloromethane, Bromochloromethane, Bromoform, Bromomethane, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chlorodibromomethane, Chloroethane, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, 1,2-Dibromo-3-Chloropropane, 1,2-Dibromoethane, Dibromomethane, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, 1,1-Dichloropropene, 1,3-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, 2,2-Dichloropropane, Ethylbenzene, Hexachloro-1,3-butadiene, 2-Hexanone, Isopropylbenzene, p-Isopropyltoluene, Methylene Chloride, 4-Methyl-2-pentanone (MIBK), Methyl tert-butyl ether, Naphthalene, n-Propylbenzene, Styrene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl chloride, Xylenes, Total: Relative Percent Difference is outside of established control limits. 8260B WG1613622 Bromomethane, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Carbon disulfide, Carbon tetrachloride, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, 1,2-Dichloropropane, 1,1-Dichloropropene, 2,2-Dichloropropane, Ethylbenzene, Hexachloro-1,3-butadiene, Isopropylbenzene, p-Isopropyltoluene, Methylene Chloride, n-Propylbenzene, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,1,1-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl chloride, Xylenes, Total: Relative Percent Difference is outside of established control limits. 8270C WG1614392 Pyridine: Relative Percent Difference is outside of established control limits. 8270C WG1616776 2,4-Dinitrophenol: Relative Percent Difference is outside of established control limits.
6	8270C WG1616776 Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene: Area counts were outside of method-required criteria.

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5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.1		1	02/02/2021 16:16	WG1614562

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.41	T8	1	02/03/2021 11:35	WG1614206

Sample Narrative:

L1311179-01 WG1614206: 8.41 at 20.8C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.488		0.0195	0.0400	0.0434	1	02/03/2021 09:19	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	55.3		0.563	2.00	2.17	1	02/03/2021 00:48	WG1613801
Barium	830		0.0925	0.500	0.543	1	02/03/2021 00:48	WG1613801
Cadmium	4.88		0.0511	0.500	0.543	1	02/03/2021 00:48	WG1613801
Chromium	61.3		0.144	1.00	1.09	1	02/03/2021 00:48	WG1613801
Lead	511		0.226	0.500	0.543	1	02/03/2021 00:48	WG1613801
Selenium	10.0		0.830	2.00	2.17	1	02/03/2021 00:48	WG1613801
Silver	1.19		0.138	1.00	1.09	1	02/03/2021 00:48	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0563	0.0500	0.0771	1.34	01/30/2021 06:14	WG1613619
Benzene	0.00120	J	0.000720	0.00100	0.00154	1.34	01/30/2021 06:14	WG1613619
Bromobenzene	U		0.00139	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
Bromochloromethane	U		0.000869	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
Bromodichloromethane	U		0.00112	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Bromoform	U		0.00180	0.0250	0.0385	1.34	01/30/2021 06:14	WG1613619
Bromomethane	U		0.00304	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
n-Butylbenzene	U		0.00809	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
sec-Butylbenzene	U		0.00444	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
tert-Butylbenzene	U		0.00301	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
Carbon disulfide	U		0.00108	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
Carbon tetrachloride	U		0.00138	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
Chlorobenzene	U		0.000324	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Chlorodibromomethane	U		0.000943	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Chloroethane	U		0.00262	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
Chloroform	U		0.00159	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Chloromethane	U		0.00670	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
2-Chlorotoluene	U		0.00133	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
4-Chlorotoluene	U		0.000693	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,2-Dibromo-3-Chloropropane	U		0.00601	0.0250	0.0385	1.34	01/30/2021 06:14	WG1613619
1,2-Dibromoethane	U		0.000999	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Dibromomethane	U		0.00116	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,2-Dichlorobenzene	U		0.000655	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,3-Dichlorobenzene	U		0.000925	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,4-Dichlorobenzene	U		0.00108	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00248	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
1,1-Dichloroethane	U		0.000757	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
1,2-Dichloroethane	U		0.00100	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
1,1-Dichloroethene	U		0.000934	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
cis-1,2-Dichloroethene	U		0.00113	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
trans-1,2-Dichloroethene	U		0.00160	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,2-Dichloropropane	U		0.00219	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,1-Dichloropropene	U		0.00125	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
1,3-Dichloropropane	U	J4	0.000772	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
cis-1,3-Dichloropropene	U		0.00117	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
trans-1,3-Dichloropropene	U		0.00176	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
2,2-Dichloropropane	U		0.00213	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Ethylbenzene	U		0.00114	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Hexachloro-1,3-butadiene	U		0.00925	0.0250	0.0385	1.34	01/30/2021 06:14	WG1613619
2-Hexanone	U		0.00518	0.0250	0.0385	1.34	01/30/2021 06:14	WG1613619
Isopropylbenzene	U		0.000655	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
p-Isopropyltoluene	U		0.00393	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
2-Butanone (MEK)	U		0.0979	0.100	0.154	1.34	01/30/2021 06:14	WG1613619
Methylene Chloride	0.0113	J	0.0102	0.0250	0.0385	1.34	01/30/2021 06:14	WG1613619
4-Methyl-2-pentanone (MIBK)	U		0.00351	0.0250	0.0385	1.34	01/30/2021 06:14	WG1613619
Methyl tert-butyl ether	U		0.000539	0.00100	0.00154	1.34	01/30/2021 06:14	WG1613619
Naphthalene	U		0.00752	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
n-Propylbenzene	U		0.00146	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
Styrene	0.000810	J	0.000353	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
1,1,1,2-Tetrachloroethane	U		0.00146	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
1,1,2,2-Tetrachloroethane	U	J4	0.00107	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Tetrachloroethene	U		0.00138	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Toluene	0.00562	J	0.00200	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,2,3-Trichlorobenzene	U		0.0113	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
1,2,4-Trichlorobenzene	U		0.00678	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
1,1,1-Trichloroethane	U		0.00142	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
1,1,2-Trichloroethane	U		0.000920	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Trichloroethene	U		0.000900	0.00100	0.00154	1.34	01/30/2021 06:14	WG1613619
Trichlorofluoromethane	U		0.00127	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
1,2,3-Trichloropropane	U		0.00250	0.0125	0.0193	1.34	01/30/2021 06:14	WG1613619
1,2,4-Trimethylbenzene	U		0.00243	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
1,3,5-Trimethylbenzene	U		0.00308	0.00500	0.00771	1.34	01/30/2021 06:14	WG1613619
Vinyl chloride	U		0.00179	0.00250	0.00385	1.34	01/30/2021 06:14	WG1613619
Xylenes, Total	0.00918	J	0.00136	0.00650	0.0100	1.34	01/30/2021 06:14	WG1613619
(S) Toluene-d8	*98.4*				*75.0-131*		*01/30/2021 06:14*	WG1613619
(S) 4-Bromofluorobenzene	*99.0*				*67.0-138*		*01/30/2021 06:14*	WG1613619
(S) 1,2-Dichloroethane-d4	*92.3*				*70.0-130*		*01/30/2021 06:14*	WG1613619

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		22.3	50.0	74.4	1.37	02/02/2021 23:03	WG1614595
TPH C12 - C28	U		22.3	50.0	74.4	1.37	02/02/2021 23:03	WG1614595
TPH C28 - C35	U		22.3	50.0	74.4	1.37	02/02/2021 23:03	WG1614595
TPH C6 - C35	U		22.3	50.0	74.4	1.37	02/02/2021 23:03	WG1614595
(S) o-Terphenyl	*108*				*70.0-130*		*02/02/2021 23:03*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00585	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Acenaphthylene	0.0218	J	0.00509	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Anthracene	0.0359	J	0.00644	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Benzo(a)anthracene	0.0415		0.00637	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Benzo(b)fluoranthene	0.122		0.00674	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Benzo(k)fluoranthene	0.0292	J	0.00643	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Benzo(g,h,i)perylene	0.0566		0.00661	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Benzo(a)pyrene	0.0526		0.00672	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Benzoic acid	U		0.128	1.67	1.81	1	02/01/2021 19:03	WG1614392
Benzyl alcohol	U		0.0134	0.333	0.362	1	02/01/2021 19:03	WG1614392
Bis(2-chlorethoxy)methane	U		0.0109	0.333	0.362	1	02/01/2021 19:03	WG1614392
Bis(2-chloroethyl)ether	U		0.0119	0.333	0.362	1	02/01/2021 19:03	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0156	0.333	0.362	1	02/01/2021 19:03	WG1614392
4-Bromophenyl-phenylether	U		0.0127	0.333	0.362	1	02/01/2021 19:03	WG1614392
Carbazole	0.0219	J	0.0112	0.333	0.362	1	02/01/2021 19:03	WG1614392
2-Chloronaphthalene	U		0.00635	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
4-Chloroaniline	U		0.0130	0.333	0.362	1	02/01/2021 19:03	WG1614392
4-Chlorophenyl-phenylether	U		0.0126	0.333	0.362	1	02/01/2021 19:03	WG1614392
Chrysene	0.0757		0.00719	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Dibenz(a,h)anthracene	U		0.0100	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Dibenzofuran	U		0.0118	0.333	0.362	1	02/01/2021 19:03	WG1614392
3,3-Dichlorobenzidine	U		0.0134	0.333	0.362	1	02/01/2021 19:03	WG1614392
2,4-Dinitrotoluene	U		0.0104	0.333	0.362	1	02/01/2021 19:03	WG1614392
2,6-Dinitrotoluene	U		0.0118	0.333	0.362	1	02/01/2021 19:03	WG1614392
Fluoranthene	0.0698		0.00653	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Fluorene	U		0.00589	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Hexachlorobenzene	U		0.0128	0.333	0.362	1	02/01/2021 19:03	WG1614392
Hexachloro-1,3-butadiene	U		0.0122	0.333	0.362	1	02/01/2021 19:03	WG1614392
Hexachlorocyclopentadiene	U		0.0190	0.333	0.362	1	02/01/2021 19:03	WG1614392
Hexachloroethane	U		0.0142	0.333	0.362	1	02/01/2021 19:03	WG1614392
Indeno(1,2,3-cd)pyrene	0.0451		0.0102	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Isophorone	U		0.0111	0.333	0.362	1	02/01/2021 19:03	WG1614392
2-Methylnaphthalene	0.00551	J	0.00469	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Naphthalene	U		0.00908	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
2-Nitroaniline	U		0.0116	0.333	0.362	1	02/01/2021 19:03	WG1614392
3-Nitroaniline	U		0.0115	0.333	0.362	1	02/01/2021 19:03	WG1614392
4-Nitroaniline	U		0.0105	0.333	0.362	1	02/01/2021 19:03	WG1614392
Nitrobenzene	U		0.0126	0.333	0.362	1	02/01/2021 19:03	WG1614392
n-Nitrosodimethylamine	U		0.0536	0.333	0.362	1	02/01/2021 19:03	WG1614392
n-Nitrosodiphenylamine	U		0.0274	0.333	0.362	1	02/01/2021 19:03	WG1614392
n-Nitrosodi-n-propylamine	U		0.0121	0.333	0.362	1	02/01/2021 19:03	WG1614392
Phenanthrene	0.0287	J	0.00718	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Benzylbutyl phthalate	0.0479	J	0.0113	0.333	0.362	1	02/01/2021 19:03	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0458	0.333	0.362	1	02/01/2021 19:03	WG1614392
Di-n-butyl phthalate	U		0.0124	0.333	0.362	1	02/01/2021 19:03	WG1614392
Diethyl phthalate	U		0.0119	0.333	0.362	1	02/01/2021 19:03	WG1614392
Dimethyl phthalate	U		0.0767	0.333	0.362	1	02/01/2021 19:03	WG1614392
Di-n-octyl phthalate	U		0.0244	0.333	0.362	1	02/01/2021 19:03	WG1614392
Pyrene	0.0801		0.00704	0.0333	0.0362	1	02/01/2021 19:03	WG1614392
Pyridine	U		0.0239	0.333	0.362	1	02/01/2021 19:03	WG1614392
1,2,4-Trichlorobenzene	U		0.0113	0.333	0.362	1	02/01/2021 19:03	WG1614392
4-Chloro-3-methylphenol	U		0.0117	0.333	0.362	1	02/01/2021 19:03	WG1614392
2-Chlorophenol	U		0.0119	0.333	0.362	1	02/01/2021 19:03	WG1614392
2,4-Dichlorophenol	U		0.0105	0.333	0.362	1	02/01/2021 19:03	WG1614392
2,4-Dimethylphenol	U		0.00945	0.333	0.362	1	02/01/2021 19:03	WG1614392
4,6-Dinitro-2-methylphenol	U		0.0820	0.333	0.362	1	02/01/2021 19:03	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dinitrophenol	U		0.0846	0.333	0.362	1	02/01/2021 19:03	WG1614392
2-Methylphenol	U		0.0109	0.333	0.362	1	02/01/2021 19:03	WG1614392
3&4-Methyl Phenol	U		0.0113	0.333	0.362	1	02/01/2021 19:03	WG1614392
2-Nitrophenol	U		0.0129	0.333	0.362	1	02/01/2021 19:03	WG1614392
4-Nitrophenol	U		0.0113	0.333	0.362	1	02/01/2021 19:03	WG1614392
Pentachlorophenol	U		0.00973	0.333	0.362	1	02/01/2021 19:03	WG1614392
Phenol	U		0.0146	0.333	0.362	1	02/01/2021 19:03	WG1614392
2,4,5-Trichlorophenol	U		0.0123	0.333	0.362	1	02/01/2021 19:03	WG1614392
2,4,6-Trichlorophenol	U		0.0116	0.333	0.362	1	02/01/2021 19:03	WG1614392
(S) 2-Fluorophenol	*52.0*				*12.0-120*		*02/01/2021 19:03*	WG1614392
(S) Phenol-d5	*47.7*				*10.0-120*		*02/01/2021 19:03*	WG1614392
(S) Nitrobenzene-d5	*45.9*				*10.0-122*		*02/01/2021 19:03*	WG1614392
(S) 2-Fluorobiphenyl	*48.6*				*15.0-120*		*02/01/2021 19:03*	WG1614392
(S) 2,4,6-Tribromophenol	*51.7*				*10.0-127*		*02/01/2021 19:03*	WG1614392
(S) p-Terphenyl-d14	*55.9*				*10.0-120*		*02/01/2021 19:03*	WG1614392

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.3		1	02/02/2021 16:16	WG1614562

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	U		0.0227	0.0400	0.0505	1	02/03/2021 09:26	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	0.667	J	0.653	2.00	2.52	1	02/03/2021 00:51	WG1613801
Barium	236		0.107	0.500	0.631	1	02/03/2021 00:51	WG1613801
Cadmium	U		0.0594	0.500	0.631	1	02/03/2021 00:51	WG1613801
Chromium	20.5		0.168	1.00	1.26	1	02/03/2021 00:51	WG1613801
Lead	22.0		0.262	0.500	0.631	1	02/03/2021 00:51	WG1613801
Selenium	1.61	J	0.964	2.00	2.52	1	02/03/2021 00:51	WG1613801
Silver	U		0.160	1.00	1.26	1	02/03/2021 00:51	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0592	0.0500	0.0811	1	01/30/2021 06:33	WG1613619
Benzene	U		0.000758	0.00100	0.00162	1	01/30/2021 06:33	WG1613619
Bromobenzene	U		0.00146	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
Bromochloromethane	U		0.000915	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
Bromodichloromethane	U		0.00118	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Bromoform	U		0.00190	0.0250	0.0406	1	01/30/2021 06:33	WG1613619
Bromomethane	U		0.00320	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
n-Butylbenzene	U		0.00852	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
sec-Butylbenzene	U		0.00467	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
tert-Butylbenzene	U		0.00316	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
Carbon disulfide	U		0.00114	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
Carbon tetrachloride	U		0.00146	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
Chlorobenzene	U		0.000341	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Chlorodibromomethane	U		0.000993	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Chloroethane	U		0.00276	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
Chloroform	U		0.00167	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Chloromethane	U		0.00706	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
2-Chlorotoluene	U		0.00140	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
4-Chlorotoluene	U		0.000730	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,2-Dibromo-3-Chloropropane	U		0.00633	0.0250	0.0406	1	01/30/2021 06:33	WG1613619
1,2-Dibromoethane	U		0.00105	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Dibromomethane	U		0.00122	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,2-Dichlorobenzene	U		0.000690	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,3-Dichlorobenzene	U		0.000974	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,4-Dichlorobenzene	U		0.00114	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
Dichlorodifluoromethane	U		0.00261	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
1,1-Dichloroethane	U		0.000797	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
1,2-Dichloroethane	U		0.00105	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
1,1-Dichloroethene	U		0.000983	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
cis-1,2-Dichloroethene	U		0.00119	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
trans-1,2-Dichloroethene	U		0.00169	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,2-Dichloropropane	U		0.00230	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,1-Dichloropropene	U		0.00131	0.00250	0.00406	1	01/30/2021 06:33	WG1613619

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U	J4	0.000813	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
cis-1,3-Dichloropropene	U		0.00123	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
trans-1,3-Dichloropropene	U		0.00185	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
2,2-Dichloropropane	U		0.00224	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Ethylbenzene	U		0.00120	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Hexachloro-1,3-butadiene	U		0.00974	0.0250	0.0406	1	01/30/2021 06:33	WG1613619
2-Hexanone	U		0.00545	0.0250	0.0406	1	01/30/2021 06:33	WG1613619
Isopropylbenzene	U		0.000690	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
p-Isopropyltoluene	U		0.00414	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
2-Butanone (MEK)	U		0.103	0.100	0.162	1	01/30/2021 06:33	WG1613619
Methylene Chloride	U		0.0108	0.0250	0.0406	1	01/30/2021 06:33	WG1613619
4-Methyl-2-pentanone (MIBK)	U		0.00370	0.0250	0.0406	1	01/30/2021 06:33	WG1613619
Methyl tert-butyl ether	U		0.000568	0.00100	0.00162	1	01/30/2021 06:33	WG1613619
Naphthalene	U		0.00792	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
n-Propylbenzene	U		0.00154	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
Styrene	U		0.000372	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
1,1,1,2-Tetrachloroethane	U		0.00154	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
1,1,2,2-Tetrachloroethane	U	J4	0.00113	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Tetrachloroethene	U		0.00145	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Toluene	0.00226	J	0.00211	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,2,3-Trichlorobenzene	U		0.0119	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
1,2,4-Trichlorobenzene	U		0.00714	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
1,1,1-Trichloroethane	U		0.00150	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
1,1,2-Trichloroethane	U		0.000969	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Trichloroethene	U		0.000948	0.00100	0.00162	1	01/30/2021 06:33	WG1613619
Trichlorofluoromethane	U		0.00134	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
1,2,3-Trichloropropane	U		0.00263	0.0125	0.0203	1	01/30/2021 06:33	WG1613619
1,2,4-Trimethylbenzene	U		0.00256	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
1,3,5-Trimethylbenzene	U		0.00325	0.00500	0.00811	1	01/30/2021 06:33	WG1613619
Vinyl chloride	U		0.00188	0.00250	0.00406	1	01/30/2021 06:33	WG1613619
Xylenes, Total	U		0.00143	0.00650	0.0105	1	01/30/2021 06:33	WG1613619
(S) Toluene-d8	*97.9*				*75.0-131*		*01/30/2021 06:33*	WG1613619
(S) 4-Bromofluorobenzene	*97.6*				*67.0-138*		*01/30/2021 06:33*	WG1613619
(S) 1,2-Dichloroethane-d4	*92.8*				*70.0-130*		*01/30/2021 06:33*	WG1613619

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		18.9	50.0	63.1	1	02/02/2021 23:19	WG1614595
TPH C12 - C28	U		18.9	50.0	63.1	1	02/02/2021 23:19	WG1614595
TPH C28 - C35	U		18.9	50.0	63.1	1	02/02/2021 23:19	WG1614595
TPH C6 - C35	U		18.9	50.0	63.1	1	02/02/2021 23:19	WG1614595
(S) o-Terphenyl	*104*				*70.0-130*		*02/02/2021 23:19*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00680	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Acenaphthylene	U		0.00592	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Anthracene	U		0.00748	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Benzo(a)anthracene	U		0.00740	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Benzo(b)fluoranthene	U		0.00783	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Benzo(k)fluoranthene	U		0.00747	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Benzo(g,h,i)perylene	U		0.00768	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Benzo(a)pyrene	U		0.00781	0.0333	0.0420	1	02/01/2021 18:39	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.149	1.67	2.11	1	02/01/2021 18:39	WG1614392
Benzyl alcohol	U		0.0155	0.333	0.420	1	02/01/2021 18:39	WG1614392
Bis(2-chlorethoxy)methane	U		0.0126	0.333	0.420	1	02/01/2021 18:39	WG1614392
Bis(2-chloroethyl)ether	U		0.0139	0.333	0.420	1	02/01/2021 18:39	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0182	0.333	0.420	1	02/01/2021 18:39	WG1614392
4-Bromophenyl-phenylether	U		0.0148	0.333	0.420	1	02/01/2021 18:39	WG1614392
Carbazole	U		0.0130	0.333	0.420	1	02/01/2021 18:39	WG1614392
2-Chloronaphthalene	U		0.00738	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
4-Chloroaniline	U		0.0151	0.333	0.420	1	02/01/2021 18:39	WG1614392
4-Chlorophenyl-phenylether	U		0.0146	0.333	0.420	1	02/01/2021 18:39	WG1614392
Chrysene	U		0.00835	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Dibenz(a,h)anthracene	U		0.0116	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Dibenzofuran	U		0.0137	0.333	0.420	1	02/01/2021 18:39	WG1614392
3,3-Dichlorobenzidine	U		0.0155	0.333	0.420	1	02/01/2021 18:39	WG1614392
2,4-Dinitrotoluene	U		0.0120	0.333	0.420	1	02/01/2021 18:39	WG1614392
2,6-Dinitrotoluene	U		0.0137	0.333	0.420	1	02/01/2021 18:39	WG1614392
Fluoranthene	U		0.00758	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Fluorene	U		0.00684	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Hexachlorobenzene	U		0.0149	0.333	0.420	1	02/01/2021 18:39	WG1614392
Hexachloro-1,3-butadiene	U		0.0141	0.333	0.420	1	02/01/2021 18:39	WG1614392
Hexachlorocyclopentadiene	U		0.0221	0.333	0.420	1	02/01/2021 18:39	WG1614392
Hexachloroethane	U		0.0165	0.333	0.420	1	02/01/2021 18:39	WG1614392
Indeno(1,2,3-cd)pyrene	U		0.0119	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Isophorone	U		0.0129	0.333	0.420	1	02/01/2021 18:39	WG1614392
2-Methylnaphthalene	U		0.00545	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Naphthalene	U		0.0105	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
2-Nitroaniline	U		0.0135	0.333	0.420	1	02/01/2021 18:39	WG1614392
3-Nitroaniline	U		0.0134	0.333	0.420	1	02/01/2021 18:39	WG1614392
4-Nitroaniline	U		0.0122	0.333	0.420	1	02/01/2021 18:39	WG1614392
Nitrobenzene	U		0.0146	0.333	0.420	1	02/01/2021 18:39	WG1614392
n-Nitrosodimethylamine	U		0.0623	0.333	0.420	1	02/01/2021 18:39	WG1614392
n-Nitrosodiphenylamine	U		0.0318	0.333	0.420	1	02/01/2021 18:39	WG1614392
n-Nitrosodi-n-propylamine	U		0.0140	0.333	0.420	1	02/01/2021 18:39	WG1614392
Phenanthrene	U		0.00834	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Benzylbutyl phthalate	U		0.0131	0.333	0.420	1	02/01/2021 18:39	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0532	0.333	0.420	1	02/01/2021 18:39	WG1614392
Di-n-butyl phthalate	U		0.0144	0.333	0.420	1	02/01/2021 18:39	WG1614392
Diethyl phthalate	U		0.0139	0.333	0.420	1	02/01/2021 18:39	WG1614392
Dimethyl phthalate	U		0.0891	0.333	0.420	1	02/01/2021 18:39	WG1614392
Di-n-octyl phthalate	U		0.0284	0.333	0.420	1	02/01/2021 18:39	WG1614392
Pyrene	U		0.00817	0.0333	0.0420	1	02/01/2021 18:39	WG1614392
Pyridine	U		0.0278	0.333	0.420	1	02/01/2021 18:39	WG1614392
1,2,4-Trichlorobenzene	U		0.0131	0.333	0.420	1	02/01/2021 18:39	WG1614392
4-Chloro-3-methylphenol	U		0.0136	0.333	0.420	1	02/01/2021 18:39	WG1614392
2-Chlorophenol	U		0.0139	0.333	0.420	1	02/01/2021 18:39	WG1614392
2,4-Dichlorophenol	U		0.0122	0.333	0.420	1	02/01/2021 18:39	WG1614392
2,4-Dimethylphenol	U		0.0110	0.333	0.420	1	02/01/2021 18:39	WG1614392
4,6-Dinitro-2-methylphenol	U		0.0952	0.333	0.420	1	02/01/2021 18:39	WG1614392
2,4-Dinitrophenol	U		0.0983	0.333	0.420	1	02/01/2021 18:39	WG1614392
2-Methylphenol	U		0.0126	0.333	0.420	1	02/01/2021 18:39	WG1614392
3&4-Methyl Phenol	U		0.0131	0.333	0.420	1	02/01/2021 18:39	WG1614392
2-Nitrophenol	U		0.0150	0.333	0.420	1	02/01/2021 18:39	WG1614392
4-Nitrophenol	U		0.0131	0.333	0.420	1	02/01/2021 18:39	WG1614392
Pentachlorophenol	U		0.0113	0.333	0.420	1	02/01/2021 18:39	WG1614392
Phenol	U		0.0169	0.333	0.420	1	02/01/2021 18:39	WG1614392
2,4,5-Trichlorophenol	U		0.0143	0.333	0.420	1	02/01/2021 18:39	WG1614392

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0135	0.333	0.420	1	02/01/2021 18:39	WG1614392
(S) 2-Fluorophenol	*64.6*				*12.0-120*		*02/01/2021 18:39*	WG1614392
(S) Phenol-d5	*59.1*				*10.0-120*		*02/01/2021 18:39*	WG1614392
(S) Nitrobenzene-d5	*57.1*				*10.0-122*		*02/01/2021 18:39*	WG1614392
(S) 2-Fluorobiphenyl	*58.7*				*15.0-120*		*02/01/2021 18:39*	WG1614392
(S) 2,4,6-Tribromophenol	*62.6*				*10.0-127*		*02/01/2021 18:39*	WG1614392
(S) p-Terphenyl-d14	*67.2*				*10.0-120*		*02/01/2021 18:39*	WG1614392

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.9		1	02/02/2021 16:16	WG1614562

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.104		0.0215	0.0400	0.0477	1	02/03/2021 09:12	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	5.13		0.618	2.00	2.38	1	02/03/2021 00:54	WG1613801
Barium	133		0.102	0.500	0.596	1	02/03/2021 00:54	WG1613801
Cadmium	0.375	J	0.0562	0.500	0.596	1	02/03/2021 00:54	WG1613801
Chromium	27.3		0.159	1.00	1.19	1	02/03/2021 00:54	WG1613801
Lead	98.5		0.248	0.500	0.596	1	02/03/2021 00:54	WG1613801
Selenium	U		0.911	2.00	2.38	1	02/03/2021 00:54	WG1613801
Silver	0.843	J	0.151	1.00	1.19	1	02/03/2021 00:54	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0521	0.0500	0.0714	1	01/30/2021 06:53	WG1613619
Benzene	U		0.000666	0.00100	0.00143	1	01/30/2021 06:53	WG1613619
Bromobenzene	U		0.00128	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
Bromochloromethane	U		0.000805	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
Bromodichloromethane	U		0.00103	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Bromoform	U		0.00167	0.0250	0.0357	1	01/30/2021 06:53	WG1613619
Bromomethane	U		0.00281	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
n-Butylbenzene	U		0.00749	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
sec-Butylbenzene	U		0.00411	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
tert-Butylbenzene	U		0.00278	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
Carbon disulfide	U		0.000999	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
Carbon tetrachloride	U		0.00128	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
Chlorobenzene	U		0.000300	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Chlorodibromomethane	U		0.000873	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Chloroethane	U		0.00243	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
Chloroform	U		0.00147	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Chloromethane	U		0.00621	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
2-Chlorotoluene	U		0.00123	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
4-Chlorotoluene	U		0.000642	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,2-Dibromo-3-Chloropropane	U		0.00557	0.0250	0.0357	1	01/30/2021 06:53	WG1613619
1,2-Dibromoethane	U		0.000925	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Dibromomethane	U		0.00107	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,2-Dichlorobenzene	U		0.000607	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,3-Dichlorobenzene	U		0.000856	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,4-Dichlorobenzene	U		0.000999	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
Dichlorodifluoromethane	U		0.00230	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
1,1-Dichloroethane	U		0.000701	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
1,2-Dichloroethane	U		0.000926	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
1,1-Dichloroethene	U		0.000865	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
cis-1,2-Dichloroethene	U		0.00105	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
trans-1,2-Dichloroethene	U		0.00148	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,2-Dichloropropane	U		0.00203	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,1-Dichloropropene	U		0.00115	0.00250	0.00357	1	01/30/2021 06:53	WG1613619

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U	J4	0.000715	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
cis-1,3-Dichloropropene	U		0.00108	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
trans-1,3-Dichloropropene	U		0.00163	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
2,2-Dichloropropane	U		0.00197	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Ethylbenzene	U		0.00105	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Hexachloro-1,3-butadiene	U		0.00856	0.0250	0.0357	1	01/30/2021 06:53	WG1613619
2-Hexanone	U		0.00480	0.0250	0.0357	1	01/30/2021 06:53	WG1613619
Isopropylbenzene	U		0.000607	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
p-Isopropyltoluene	U		0.00364	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
2-Butanone (MEK)	U		0.0906	0.100	0.143	1	01/30/2021 06:53	WG1613619
Methylene Chloride	U		0.00948	0.0250	0.0357	1	01/30/2021 06:53	WG1613619
4-Methyl-2-pentanone (MIBK)	U		0.00325	0.0250	0.0357	1	01/30/2021 06:53	WG1613619
Methyl tert-butyl ether	U		0.000500	0.00100	0.00143	1	01/30/2021 06:53	WG1613619
Naphthalene	0.0178	J	0.00696	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
n-Propylbenzene	U		0.00136	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
Styrene	U		0.000327	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
1,1,1,2-Tetrachloroethane	U		0.00135	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
1,1,2,2-Tetrachloroethane	U	J4	0.000992	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Tetrachloroethene	U		0.00128	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Toluene	0.00264	J	0.00186	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,2,3-Trichlorobenzene	U		0.0105	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
1,2,4-Trichlorobenzene	U		0.00628	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
1,1,1-Trichloroethane	U		0.00132	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
1,1,2-Trichloroethane	U		0.000852	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Trichloroethene	U		0.000833	0.00100	0.00143	1	01/30/2021 06:53	WG1613619
Trichlorofluoromethane	U		0.00118	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
1,2,3-Trichloropropane	U		0.00231	0.0125	0.0178	1	01/30/2021 06:53	WG1613619
1,2,4-Trimethylbenzene	U		0.00225	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
1,3,5-Trimethylbenzene	U		0.00285	0.00500	0.00714	1	01/30/2021 06:53	WG1613619
Vinyl chloride	U		0.00166	0.00250	0.00357	1	01/30/2021 06:53	WG1613619
Xylenes, Total	0.00135	J	0.00126	0.00650	0.00928	1	01/30/2021 06:53	WG1613619
(S) Toluene-d8	*97.9*				*75.0-131*		*01/30/2021 06:53*	WG1613619
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*01/30/2021 06:53*	WG1613619
(S) 1,2-Dichloroethane-d4	*96.3*				*70.0-130*		*01/30/2021 06:53*	WG1613619

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		17.9	50.0	59.6	1	02/02/2021 23:35	WG1614595
TPH C12 - C28	U		17.9	50.0	59.6	1	02/02/2021 23:35	WG1614595
TPH C28 - C35	U		17.9	50.0	59.6	1	02/02/2021 23:35	WG1614595
TPH C6 - C35	U		17.9	50.0	59.6	1	02/02/2021 23:35	WG1614595
(S) o-Terphenyl	*115*				*70.0-130*		*02/02/2021 23:35*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.0340	J	0.0129	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Acenaphthylene	0.0123	J	0.0112	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Anthracene	0.0723	J	0.0141	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Benzo(a)anthracene	0.184		0.0140	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Benzo(b)fluoranthene	0.234		0.0148	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Benzo(k)fluoranthene	0.0795		0.0141	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Benzo(g,h,i)perylene	0.0687	J	0.0145	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Benzo(a)pyrene	0.162		0.0148	0.0333	0.0794	2	02/01/2021 22:52	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.281	1.67	3.98	2	02/01/2021 22:52	WG1614392
Benzyl alcohol	U		0.0293	0.333	0.794	2	02/01/2021 22:52	WG1614392
Bis(2-chlorethoxy)methane	U		0.0238	0.333	0.794	2	02/01/2021 22:52	WG1614392
Bis(2-chloroethyl)ether	U		0.0262	0.333	0.794	2	02/01/2021 22:52	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0343	0.333	0.794	2	02/01/2021 22:52	WG1614392
4-Bromophenyl-phenylether	U		0.0279	0.333	0.794	2	02/01/2021 22:52	WG1614392
Carbazole	0.0256	J	0.0246	0.333	0.794	2	02/01/2021 22:52	WG1614392
2-Chloronaphthalene	U		0.0140	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
4-Chloroaniline	U		0.0286	0.333	0.794	2	02/01/2021 22:52	WG1614392
4-Chlorophenyl-phenylether	U		0.0277	0.333	0.794	2	02/01/2021 22:52	WG1614392
Chrysene	0.168		0.0158	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Dibenz(a,h)anthracene	U		0.0220	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Dibenzofuran	0.0304	J	0.0260	0.333	0.794	2	02/01/2021 22:52	WG1614392
3,3-Dichlorobenzidine	U		0.0293	0.333	0.794	2	02/01/2021 22:52	WG1614392
2,4-Dinitrotoluene	U		0.0228	0.333	0.794	2	02/01/2021 22:52	WG1614392
2,6-Dinitrotoluene	U		0.0260	0.333	0.794	2	02/01/2021 22:52	WG1614392
Fluoranthene	0.352		0.0143	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Fluorene	0.0428	J	0.0129	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Hexachlorobenzene	U		0.0281	0.333	0.794	2	02/01/2021 22:52	WG1614392
Hexachloro-1,3-butadiene	U		0.0267	0.333	0.794	2	02/01/2021 22:52	WG1614392
Hexachlorocyclopentadiene	U		0.0417	0.333	0.794	2	02/01/2021 22:52	WG1614392
Hexachloroethane	U		0.0312	0.333	0.794	2	02/01/2021 22:52	WG1614392
Indeno(1,2,3-cd)pyrene	0.0788	J	0.0224	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Isophorone	U		0.0243	0.333	0.794	2	02/01/2021 22:52	WG1614392
2-Methylnaphthalene	0.0203	J	0.0103	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Naphthalene	0.0281	J	0.0199	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
2-Nitroaniline	U		0.0255	0.333	0.794	2	02/01/2021 22:52	WG1614392
3-Nitroaniline	U		0.0253	0.333	0.794	2	02/01/2021 22:52	WG1614392
4-Nitroaniline	U		0.0232	0.333	0.794	2	02/01/2021 22:52	WG1614392
Nitrobenzene	U		0.0277	0.333	0.794	2	02/01/2021 22:52	WG1614392
n-Nitrosodimethylamine	U		0.118	0.333	0.794	2	02/01/2021 22:52	WG1614392
n-Nitrosodiphenylamine	U		0.0601	0.333	0.794	2	02/01/2021 22:52	WG1614392
n-Nitrosodi-n-propylamine	U		0.0265	0.333	0.794	2	02/01/2021 22:52	WG1614392
Phenanthrene	0.266		0.0158	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Benzylbutyl phthalate	U		0.0248	0.333	0.794	2	02/01/2021 22:52	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.101	0.333	0.794	2	02/01/2021 22:52	WG1614392
Di-n-butyl phthalate	U		0.0272	0.333	0.794	2	02/01/2021 22:52	WG1614392
Diethyl phthalate	U		0.0262	0.333	0.794	2	02/01/2021 22:52	WG1614392
Dimethyl phthalate	U		0.168	0.333	0.794	2	02/01/2021 22:52	WG1614392
Di-n-octyl phthalate	U		0.0537	0.333	0.794	2	02/01/2021 22:52	WG1614392
Pyrene	0.320		0.0155	0.0333	0.0794	2	02/01/2021 22:52	WG1614392
Pyridine	U		0.0525	0.333	0.794	2	02/01/2021 22:52	WG1614392
1,2,4-Trichlorobenzene	U		0.0248	0.333	0.794	2	02/01/2021 22:52	WG1614392
4-Chloro-3-methylphenol	U		0.0258	0.333	0.794	2	02/01/2021 22:52	WG1614392
2-Chlorophenol	U		0.0262	0.333	0.794	2	02/01/2021 22:52	WG1614392
2,4-Dichlorophenol	U		0.0231	0.333	0.794	2	02/01/2021 22:52	WG1614392
2,4-Dimethylphenol	U		0.0207	0.333	0.794	2	02/01/2021 22:52	WG1614392
4,6-Dinitro-2-methylphenol	U		0.180	0.333	0.794	2	02/01/2021 22:52	WG1614392
2,4-Dinitrophenol	U		0.186	0.333	0.794	2	02/01/2021 22:52	WG1614392
2-Methylphenol	U		0.0238	0.333	0.794	2	02/01/2021 22:52	WG1614392
3&4-Methyl Phenol	U		0.0248	0.333	0.794	2	02/01/2021 22:52	WG1614392
2-Nitrophenol	U		0.0284	0.333	0.794	2	02/01/2021 22:52	WG1614392
4-Nitrophenol	U		0.0248	0.333	0.794	2	02/01/2021 22:52	WG1614392
Pentachlorophenol	U		0.0214	0.333	0.794	2	02/01/2021 22:52	WG1614392
Phenol	U		0.0320	0.333	0.794	2	02/01/2021 22:52	WG1614392
2,4,5-Trichlorophenol	U		0.0269	0.333	0.794	2	02/01/2021 22:52	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0255	0.333	0.794	2	02/01/2021 22:52	WG1614392
(S) 2-Fluorophenol	*64.6*				*12.0-120*		*02/01/2021 22:52*	WG1614392
(S) Phenol-d5	*59.3*				*10.0-120*		*02/01/2021 22:52*	WG1614392
(S) Nitrobenzene-d5	*56.1*				*10.0-122*		*02/01/2021 22:52*	WG1614392
(S) 2-Fluorobiphenyl	*61.6*				*15.0-120*		*02/01/2021 22:52*	WG1614392
(S) 2,4,6-Tribromophenol	*61.9*				*10.0-127*		*02/01/2021 22:52*	WG1614392
(S) p-Terphenyl-d14	*65.9*				*10.0-120*		*02/01/2021 22:52*	WG1614392

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.9		1	02/02/2021 16:16	WG1614562

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	U		0.0240	0.0400	0.0534	1	02/03/2021 09:29	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	1.37	J	0.691	2.00	2.67	1	02/03/2021 00:56	WG1613801
Barium	88.6		0.114	0.500	0.667	1	02/03/2021 00:56	WG1613801
Cadmium	U		0.0629	0.500	0.667	1	02/03/2021 00:56	WG1613801
Chromium	14.1		0.178	1.00	1.33	1	02/03/2021 00:56	WG1613801
Lead	16.3		0.278	0.500	0.667	1	02/03/2021 00:56	WG1613801
Selenium	1.11	J	1.02	2.00	2.67	1	02/03/2021 00:56	WG1613801
Silver	U		0.170	1.00	1.33	1	02/03/2021 00:56	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0702	0.0500	0.0962	1.19	01/30/2021 07:12	WG1613619
Benzene	U		0.000899	0.00100	0.00192	1.19	01/30/2021 07:12	WG1613619
Bromobenzene	U		0.00173	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
Bromochloromethane	U		0.00109	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
Bromodichloromethane	U		0.00140	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Bromoform	U		0.00225	0.0250	0.0480	1.19	01/30/2021 07:12	WG1613619
Bromomethane	U		0.00379	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
n-Butylbenzene	U		0.0101	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
sec-Butylbenzene	U		0.00554	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
tert-Butylbenzene	U		0.00375	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
Carbon disulfide	U		0.00135	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
Carbon tetrachloride	U		0.00173	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
Chlorobenzene	U		0.000404	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Chlorodibromomethane	U		0.00118	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Chloroethane	U		0.00327	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
Chloroform	U		0.00198	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Chloromethane	U		0.00837	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
2-Chlorotoluene	U		0.00166	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
4-Chlorotoluene	U		0.000866	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,2-Dibromo-3-Chloropropane	U		0.00750	0.0250	0.0480	1.19	01/30/2021 07:12	WG1613619
1,2-Dibromoethane	U		0.00125	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Dibromomethane	U		0.00144	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,2-Dichlorobenzene	U		0.000818	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,3-Dichlorobenzene	U		0.00115	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,4-Dichlorobenzene	U		0.00135	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
Dichlorodifluoromethane	U		0.00310	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
1,1-Dichloroethane	U		0.000945	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
1,2-Dichloroethane	U		0.00125	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
1,1-Dichloroethene	U		0.00117	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
cis-1,2-Dichloroethene	U		0.00141	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
trans-1,2-Dichloroethene	U		0.00200	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,2-Dichloropropane	U		0.00273	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,1-Dichloropropene	U		0.00156	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U	J4	0.000964	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
cis-1,3-Dichloropropene	U		0.00146	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
trans-1,3-Dichloropropene	U		0.00219	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
2,2-Dichloropropane	U		0.00266	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Ethylbenzene	U		0.00142	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Hexachloro-1,3-butadiene	U		0.0115	0.0250	0.0480	1.19	01/30/2021 07:12	WG1613619
2-Hexanone	U		0.00647	0.0250	0.0480	1.19	01/30/2021 07:12	WG1613619
Isopropylbenzene	0.00111	J	0.000818	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
p-Isopropyltoluene	U		0.00491	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
2-Butanone (MEK)	U		0.122	0.100	0.192	1.19	01/30/2021 07:12	WG1613619
Methylene Chloride	U		0.0128	0.0250	0.0480	1.19	01/30/2021 07:12	WG1613619
4-Methyl-2-pentanone (MIBK)	U		0.00439	0.0250	0.0480	1.19	01/30/2021 07:12	WG1613619
Methyl tert-butyl ether	U		0.000674	0.00100	0.00192	1.19	01/30/2021 07:12	WG1613619
Naphthalene	U		0.00939	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
n-Propylbenzene	U		0.00183	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
Styrene	U		0.000441	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
1,1,1,2-Tetrachloroethane	U		0.00182	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
1,1,2,2-Tetrachloroethane	U	J4	0.00134	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Tetrachloroethene	U		0.00172	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Toluene	U		0.00250	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,2,3-Trichlorobenzene	U		0.0141	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
1,2,4-Trichlorobenzene	U		0.00847	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
1,1,1-Trichloroethane	U		0.00178	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
1,1,2-Trichloroethane	U		0.00115	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Trichloroethene	U		0.00112	0.00100	0.00192	1.19	01/30/2021 07:12	WG1613619
Trichlorofluoromethane	U		0.00159	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
1,2,3-Trichloropropane	U		0.00312	0.0125	0.0241	1.19	01/30/2021 07:12	WG1613619
1,2,4-Trimethylbenzene	U		0.00304	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
1,3,5-Trimethylbenzene	U		0.00385	0.00500	0.00962	1.19	01/30/2021 07:12	WG1613619
Vinyl chloride	U		0.00223	0.00250	0.00480	1.19	01/30/2021 07:12	WG1613619
Xylenes, Total	U		0.00169	0.00650	0.0125	1.19	01/30/2021 07:12	WG1613619
(S) Toluene-d8	*99.7*				*75.0-131*		*01/30/2021 07:12*	WG1613619
(S) 4-Bromofluorobenzene	*102*				*67.0-138*		*01/30/2021 07:12*	WG1613619
(S) 1,2-Dichloroethane-d4	*92.6*				*70.0-130*		*01/30/2021 07:12*	WG1613619

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		20.0	50.0	66.7	1	02/02/2021 23:50	WG1614595
TPH C12 - C28	U		20.0	50.0	66.7	1	02/02/2021 23:50	WG1614595
TPH C28 - C35	U		20.0	50.0	66.7	1	02/02/2021 23:50	WG1614595
TPH C6 - C35	U		20.0	50.0	66.7	1	02/02/2021 23:50	WG1614595
(S) o-Terphenyl	*106*				*70.0-130*		*02/02/2021 23:50*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00719	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Acenaphthylene	U		0.00626	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Anthracene	U		0.00792	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Benzo(a)anthracene	U		0.00784	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Benzo(b)fluoranthene	U		0.00829	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Benzo(k)fluoranthene	U		0.00790	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Benzo(g,h,i)perylene	U		0.00813	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Benzo(a)pyrene	U		0.00826	0.0333	0.0444	1	02/01/2021 19:28	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.158	1.67	2.23	1	02/01/2021 19:28	WG1614392
Benzyl alcohol	U		0.0164	0.333	0.444	1	02/01/2021 19:28	WG1614392
Bis(2-chlorethoxy)methane	U		0.0133	0.333	0.444	1	02/01/2021 19:28	WG1614392
Bis(2-chloroethyl)ether	U		0.0147	0.333	0.444	1	02/01/2021 19:28	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0192	0.333	0.444	1	02/01/2021 19:28	WG1614392
4-Bromophenyl-phenylether	U		0.0156	0.333	0.444	1	02/01/2021 19:28	WG1614392
Carbazole	U		0.0137	0.333	0.444	1	02/01/2021 19:28	WG1614392
2-Chloronaphthalene	U		0.00781	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
4-Chloroaniline	U		0.0160	0.333	0.444	1	02/01/2021 19:28	WG1614392
4-Chlorophenyl-phenylether	U		0.0155	0.333	0.444	1	02/01/2021 19:28	WG1614392
Chrysene	U		0.00884	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Dibenz(a,h)anthracene	U		0.0123	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Dibenzofuran	U		0.0145	0.333	0.444	1	02/01/2021 19:28	WG1614392
3,3-Dichlorobenzidine	U		0.0164	0.333	0.444	1	02/01/2021 19:28	WG1614392
2,4-Dinitrotoluene	U		0.0127	0.333	0.444	1	02/01/2021 19:28	WG1614392
2,6-Dinitrotoluene	U		0.0145	0.333	0.444	1	02/01/2021 19:28	WG1614392
Fluoranthene	U		0.00802	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Fluorene	U		0.00723	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Hexachlorobenzene	U		0.0158	0.333	0.444	1	02/01/2021 19:28	WG1614392
Hexachloro-1,3-butadiene	U		0.0149	0.333	0.444	1	02/01/2021 19:28	WG1614392
Hexachlorocyclopentadiene	U		0.0234	0.333	0.444	1	02/01/2021 19:28	WG1614392
Hexachloroethane	U		0.0175	0.333	0.444	1	02/01/2021 19:28	WG1614392
Indeno(1,2,3-cd)pyrene	U		0.0126	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Isophorone	U		0.0136	0.333	0.444	1	02/01/2021 19:28	WG1614392
2-Methylnaphthalene	U		0.00577	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Naphthalene	U		0.0112	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
2-Nitroaniline	U		0.0143	0.333	0.444	1	02/01/2021 19:28	WG1614392
3-Nitroaniline	U		0.0141	0.333	0.444	1	02/01/2021 19:28	WG1614392
4-Nitroaniline	U		0.0130	0.333	0.444	1	02/01/2021 19:28	WG1614392
Nitrobenzene	U		0.0155	0.333	0.444	1	02/01/2021 19:28	WG1614392
n-Nitrosodimethylamine	U		0.0659	0.333	0.444	1	02/01/2021 19:28	WG1614392
n-Nitrosodiphenylamine	U		0.0336	0.333	0.444	1	02/01/2021 19:28	WG1614392
n-Nitrosodi-n-propylamine	U		0.0148	0.333	0.444	1	02/01/2021 19:28	WG1614392
Phenanthrene	U		0.00882	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Benzylbutyl phthalate	U		0.0139	0.333	0.444	1	02/01/2021 19:28	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0563	0.333	0.444	1	02/01/2021 19:28	WG1614392
Di-n-butyl phthalate	U		0.0152	0.333	0.444	1	02/01/2021 19:28	WG1614392
Diethyl phthalate	U		0.0147	0.333	0.444	1	02/01/2021 19:28	WG1614392
Dimethyl phthalate	U		0.0942	0.333	0.444	1	02/01/2021 19:28	WG1614392
Di-n-octyl phthalate	U		0.0300	0.333	0.444	1	02/01/2021 19:28	WG1614392
Pyrene	U		0.00865	0.0333	0.0444	1	02/01/2021 19:28	WG1614392
Pyridine	U		0.0294	0.333	0.444	1	02/01/2021 19:28	WG1614392
1,2,4-Trichlorobenzene	U		0.0139	0.333	0.444	1	02/01/2021 19:28	WG1614392
4-Chloro-3-methylphenol	U		0.0144	0.333	0.444	1	02/01/2021 19:28	WG1614392
2-Chlorophenol	U		0.0147	0.333	0.444	1	02/01/2021 19:28	WG1614392
2,4-Dichlorophenol	U		0.0129	0.333	0.444	1	02/01/2021 19:28	WG1614392
2,4-Dimethylphenol	U		0.0116	0.333	0.444	1	02/01/2021 19:28	WG1614392
4,6-Dinitro-2-methylphenol	U		0.101	0.333	0.444	1	02/01/2021 19:28	WG1614392
2,4-Dinitrophenol	U		0.104	0.333	0.444	1	02/01/2021 19:28	WG1614392
2-Methylphenol	U		0.0133	0.333	0.444	1	02/01/2021 19:28	WG1614392
3&4-Methyl Phenol	U		0.0139	0.333	0.444	1	02/01/2021 19:28	WG1614392
2-Nitrophenol	U		0.0159	0.333	0.444	1	02/01/2021 19:28	WG1614392
4-Nitrophenol	U		0.0139	0.333	0.444	1	02/01/2021 19:28	WG1614392
Pentachlorophenol	U		0.0120	0.333	0.444	1	02/01/2021 19:28	WG1614392
Phenol	U		0.0179	0.333	0.444	1	02/01/2021 19:28	WG1614392
2,4,5-Trichlorophenol	U		0.0151	0.333	0.444	1	02/01/2021 19:28	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0143	0.333	0.444	1	02/01/2021 19:28	WG1614392
(S) 2-Fluorophenol	*64.3*				*12.0-120*		*02/01/2021 19:28*	WG1614392
(S) Phenol-d5	*56.5*				*10.0-120*		*02/01/2021 19:28*	WG1614392
(S) Nitrobenzene-d5	*52.6*				*10.0-122*		*02/01/2021 19:28*	WG1614392
(S) 2-Fluorobiphenyl	*59.0*				*15.0-120*		*02/01/2021 19:28*	WG1614392
(S) 2,4,6-Tribromophenol	*58.7*				*10.0-127*		*02/01/2021 19:28*	WG1614392
(S) p-Terphenyl-d14	*62.6*				*10.0-120*		*02/01/2021 19:28*	WG1614392

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	60.4		1	02/02/2021 16:16	WG1614562

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	7.99	T8	1	02/02/2021 00:57	WG1614203

Sample Narrative:

L1311179-05 WG1614203: 7.99 at 20.9C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.117		0.0298	0.0400	0.0662	1	02/03/2021 09:31	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	38.3		0.857	2.00	3.31	1	02/03/2021 01:05	WG1613801
Barium	461		0.141	0.500	0.828	1	02/03/2021 01:05	WG1613801
Cadmium	1.92		0.0780	0.500	0.828	1	02/03/2021 01:05	WG1613801
Chromium	27.4		0.220	1.00	1.66	1	02/03/2021 01:05	WG1613801
Lead	243		0.344	0.500	0.828	1	02/03/2021 01:05	WG1613801
Selenium	2.13	J	1.26	2.00	3.31	1	02/03/2021 01:05	WG1613801
Silver	0.302	J	0.210	1.00	1.66	1	02/03/2021 01:05	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0866	0.0500	0.119	1	01/30/2021 07:31	WG1613619
Benzene	U		0.00111	0.00100	0.00237	1	01/30/2021 07:31	WG1613619
Bromobenzene	U		0.00213	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
Bromochloromethane	U		0.00134	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
Bromodichloromethane	U		0.00172	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Bromoform	U		0.00277	0.0250	0.0593	1	01/30/2021 07:31	WG1613619
Bromomethane	U		0.00467	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
n-Butylbenzene	U		0.0124	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
sec-Butylbenzene	U		0.00683	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
tert-Butylbenzene	U		0.00462	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
Carbon disulfide	U		0.00166	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
Carbon tetrachloride	U		0.00213	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
Chlorobenzene	U		0.000498	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Chlorodibromomethane	U		0.00145	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Chloroethane	U		0.00403	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
Chloroform	U		0.00244	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Chloromethane	U		0.0103	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
2-Chlorotoluene	U		0.00205	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
4-Chlorotoluene	U		0.00107	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,2-Dibromo-3-Chloropropane	U		0.00925	0.0250	0.0593	1	01/30/2021 07:31	WG1613619
1,2-Dibromoethane	U		0.00154	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Dibromomethane	U		0.00178	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,2-Dichlorobenzene	U		0.00101	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,3-Dichlorobenzene	U		0.00142	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,4-Dichlorobenzene	U		0.00166	0.00500	0.0119	1	01/30/2021 07:31	WG1613619

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00382	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
1,1-Dichloroethane	U		0.00116	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
1,2-Dichloroethane	U		0.00154	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
1,1-Dichloroethene	U		0.00144	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
cis-1,2-Dichloroethene	U		0.00174	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
trans-1,2-Dichloroethene	U		0.00247	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,2-Dichloropropane	U		0.00337	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,1-Dichloropropene	U		0.00192	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
1,3-Dichloropropane	U	J4	0.00119	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
cis-1,3-Dichloropropene	U		0.00180	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
trans-1,3-Dichloropropene	U		0.00270	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
2,2-Dichloropropane	U		0.00327	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Ethylbenzene	0.00486	J	0.00175	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Hexachloro-1,3-butadiene	U		0.0142	0.0250	0.0593	1	01/30/2021 07:31	WG1613619
2-Hexanone	U		0.00797	0.0250	0.0593	1	01/30/2021 07:31	WG1613619
Isopropylbenzene	U		0.00101	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
p-Isopropyltoluene	U		0.00605	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
2-Butanone (MEK)	U		0.151	0.100	0.237	1	01/30/2021 07:31	WG1613619
Methylene Chloride	U		0.0157	0.0250	0.0593	1	01/30/2021 07:31	WG1613619
4-Methyl-2-pentanone (MIBK)	U		0.00541	0.0250	0.0593	1	01/30/2021 07:31	WG1613619
Methyl tert-butyl ether	U		0.000830	0.00100	0.00237	1	01/30/2021 07:31	WG1613619
Naphthalene	U		0.0116	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
n-Propylbenzene	U		0.00225	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
Styrene	U		0.000543	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
1,1,1,2-Tetrachloroethane	U		0.00225	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
1,1,2,2-Tetrachloroethane	U	J4	0.00165	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Tetrachloroethene	U		0.00212	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Toluene	0.00448	J	0.00308	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,2,3-Trichlorobenzene	U		0.0174	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
1,2,4-Trichlorobenzene	U		0.0104	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
1,1,1-Trichloroethane	U		0.00219	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
1,1,2-Trichloroethane	U		0.00142	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Trichloroethene	U		0.00138	0.00100	0.00237	1	01/30/2021 07:31	WG1613619
Trichlorofluoromethane	U		0.00196	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
1,2,3-Trichloropropane	U		0.00384	0.0125	0.0296	1	01/30/2021 07:31	WG1613619
1,2,4-Trimethylbenzene	U		0.00375	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
1,3,5-Trimethylbenzene	U		0.00474	0.00500	0.0119	1	01/30/2021 07:31	WG1613619
Vinyl chloride	U		0.00275	0.00250	0.00593	1	01/30/2021 07:31	WG1613619
Xylenes, Total	0.0337		0.00209	0.00650	0.0154	1	01/30/2021 07:31	WG1613619
(S) Toluene-d8	*97.2*				*75.0-131*		*01/30/2021 07:31*	WG1613619
(S) 4-Bromofluorobenzene	*98.4*				*67.0-138*		*01/30/2021 07:31*	WG1613619
(S) 1,2-Dichloroethane-d4	*94.0*				*70.0-130*		*01/30/2021 07:31*	WG1613619

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		24.8	50.0	82.8	1	02/03/2021 00:04	WG1614595
TPH C12 - C28	U		24.8	50.0	82.8	1	02/03/2021 00:04	WG1614595
TPH C28 - C35	U		24.8	50.0	82.8	1	02/03/2021 00:04	WG1614595
TPH C6 - C35	U		24.8	50.0	82.8	1	02/03/2021 00:04	WG1614595
(S) o-Terphenyl	*106*				*70.0-130*		*02/03/2021 00:04*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00892	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Acenaphthylene	0.0200	J	0.00776	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Anthracene	0.0394	J	0.00982	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Benzo(a)anthracene	0.0508	J	0.00972	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Benzo(b)fluoranthene	0.0849		0.0103	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Benzo(k)fluoranthene	0.0263	J	0.00980	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Benzo(g,h,i)perylene	0.0396	J	0.0101	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Benzo(a)pyrene	0.0566		0.0102	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Benzoic acid	U		0.195	1.67	2.76	1	02/01/2021 19:52	WG1614392
Benzyl alcohol	U		0.0204	0.333	0.551	1	02/01/2021 19:52	WG1614392
Bis(2-chlorethoxy)methane	U		0.0166	0.333	0.551	1	02/01/2021 19:52	WG1614392
Bis(2-chloroethyl)ether	U		0.0182	0.333	0.551	1	02/01/2021 19:52	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0238	0.333	0.551	1	02/01/2021 19:52	WG1614392
4-Bromophenyl-phenylether	U		0.0194	0.333	0.551	1	02/01/2021 19:52	WG1614392
Carbazole	U		0.0170	0.333	0.551	1	02/01/2021 19:52	WG1614392
2-Chloronaphthalene	U		0.00968	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
4-Chloroaniline	U		0.0199	0.333	0.551	1	02/01/2021 19:52	WG1614392
4-Chlorophenyl-phenylether	U		0.0192	0.333	0.551	1	02/01/2021 19:52	WG1614392
Chrysene	0.0473	J	0.0110	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Dibenz(a,h)anthracene	U		0.0153	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Dibenzofuran	U		0.0180	0.333	0.551	1	02/01/2021 19:52	WG1614392
3,3-Dichlorobenzidine	U		0.0204	0.333	0.551	1	02/01/2021 19:52	WG1614392
2,4-Dinitrotoluene	U		0.0158	0.333	0.551	1	02/01/2021 19:52	WG1614392
2,6-Dinitrotoluene	U		0.0180	0.333	0.551	1	02/01/2021 19:52	WG1614392
Fluoranthene	0.0786		0.00995	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Fluorene	U		0.00897	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Hexachlorobenzene	U		0.0195	0.333	0.551	1	02/01/2021 19:52	WG1614392
Hexachloro-1,3-butadiene	U		0.0185	0.333	0.551	1	02/01/2021 19:52	WG1614392
Hexachlorocyclopentadiene	U		0.0290	0.333	0.551	1	02/01/2021 19:52	WG1614392
Hexachloroethane	U		0.0217	0.333	0.551	1	02/01/2021 19:52	WG1614392
Indeno(1,2,3-cd)pyrene	U		0.0156	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Isophorone	U		0.0169	0.333	0.551	1	02/01/2021 19:52	WG1614392
2-Methylnaphthalene	U		0.00715	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Naphthalene	U		0.0138	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
2-Nitroaniline	U		0.0177	0.333	0.551	1	02/01/2021 19:52	WG1614392
3-Nitroaniline	U		0.0175	0.333	0.551	1	02/01/2021 19:52	WG1614392
4-Nitroaniline	U		0.0161	0.333	0.551	1	02/01/2021 19:52	WG1614392
Nitrobenzene	U		0.0192	0.333	0.551	1	02/01/2021 19:52	WG1614392
n-Nitrosodimethylamine	U		0.0818	0.333	0.551	1	02/01/2021 19:52	WG1614392
n-Nitrosodiphenylamine	U		0.0417	0.333	0.551	1	02/01/2021 19:52	WG1614392
n-Nitrosodi-n-propylamine	U		0.0184	0.333	0.551	1	02/01/2021 19:52	WG1614392
Phenanthrene	0.0273	J	0.0109	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Benzylbutyl phthalate	U		0.0172	0.333	0.551	1	02/01/2021 19:52	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0699	0.333	0.551	1	02/01/2021 19:52	WG1614392
Di-n-butyl phthalate	U		0.0189	0.333	0.551	1	02/01/2021 19:52	WG1614392
Diethyl phthalate	U		0.0182	0.333	0.551	1	02/01/2021 19:52	WG1614392
Dimethyl phthalate	U		0.117	0.333	0.551	1	02/01/2021 19:52	WG1614392
Di-n-octyl phthalate	U		0.0372	0.333	0.551	1	02/01/2021 19:52	WG1614392
Pyrene	0.0760		0.0107	0.0333	0.0551	1	02/01/2021 19:52	WG1614392
Pyridine	U		0.0364	0.333	0.551	1	02/01/2021 19:52	WG1614392
1,2,4-Trichlorobenzene	U		0.0172	0.333	0.551	1	02/01/2021 19:52	WG1614392
4-Chloro-3-methylphenol	U		0.0179	0.333	0.551	1	02/01/2021 19:52	WG1614392
2-Chlorophenol	U		0.0182	0.333	0.551	1	02/01/2021 19:52	WG1614392
2,4-Dichlorophenol	U		0.0161	0.333	0.551	1	02/01/2021 19:52	WG1614392
2,4-Dimethylphenol	U		0.0144	0.333	0.551	1	02/01/2021 19:52	WG1614392
4,6-Dinitro-2-methylphenol	U		0.125	0.333	0.551	1	02/01/2021 19:52	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dinitrophenol	U		0.129	0.333	0.551	1	02/01/2021 19:52	WG1614392
2-Methylphenol	U		0.0166	0.333	0.551	1	02/01/2021 19:52	WG1614392
3&4-Methyl Phenol	U		0.0172	0.333	0.551	1	02/01/2021 19:52	WG1614392
2-Nitrophenol	U		0.0197	0.333	0.551	1	02/01/2021 19:52	WG1614392
4-Nitrophenol	U		0.0172	0.333	0.551	1	02/01/2021 19:52	WG1614392
Pentachlorophenol	U		0.0148	0.333	0.551	1	02/01/2021 19:52	WG1614392
Phenol	U		0.0222	0.333	0.551	1	02/01/2021 19:52	WG1614392
2,4,5-Trichlorophenol	U		0.0187	0.333	0.551	1	02/01/2021 19:52	WG1614392
2,4,6-Trichlorophenol	U		0.0177	0.333	0.551	1	02/01/2021 19:52	WG1614392
(S) 2-Fluorophenol	*58.9*				*12.0-120*		*02/01/2021 19:52*	WG1614392
(S) Phenol-d5	*54.2*				*10.0-120*		*02/01/2021 19:52*	WG1614392
(S) Nitrobenzene-d5	*51.2*				*10.0-122*		*02/01/2021 19:52*	WG1614392
(S) 2-Fluorobiphenyl	*55.5*				*15.0-120*		*02/01/2021 19:52*	WG1614392
(S) 2,4,6-Tribromophenol	*58.9*				*10.0-127*		*02/01/2021 19:52*	WG1614392
(S) p-Terphenyl-d14	*61.8*				*10.0-120*		*02/01/2021 19:52*	WG1614392

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.3		1	02/02/2021 16:16	WG1614562

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0270	J	0.0199	0.0400	0.0443	1	02/03/2021 09:34	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	1.70	J	0.574	2.00	2.22	1	02/03/2021 01:07	WG1613801
Barium	283		0.0944	0.500	0.554	1	02/03/2021 01:07	WG1613801
Cadmium	U		0.0522	0.500	0.554	1	02/03/2021 01:07	WG1613801
Chromium	23.4		0.147	1.00	1.11	1	02/03/2021 01:07	WG1613801
Lead	16.2		0.230	0.500	0.554	1	02/03/2021 01:07	WG1613801
Selenium	1.25	J	0.846	2.00	2.22	1	02/03/2021 01:07	WG1613801
Silver	U		0.141	1.00	1.11	1	02/03/2021 01:07	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0451	0.0500	0.0618	1	01/30/2021 07:50	WG1613619
Benzene	U		0.000578	0.00100	0.00124	1	01/30/2021 07:50	WG1613619
Bromobenzene	U		0.00111	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
Bromochloromethane	U		0.000698	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
Bromodichloromethane	U		0.000897	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Bromoform	U		0.00145	0.0250	0.0309	1	01/30/2021 07:50	WG1613619
Bromomethane	U		0.00244	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
n-Butylbenzene	U		0.00649	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
sec-Butylbenzene	U		0.00356	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
tert-Butylbenzene	U		0.00241	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
Carbon disulfide	U		0.000866	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
Carbon tetrachloride	U		0.00111	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
Chlorobenzene	U		0.000260	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Chlorodibromomethane	U		0.000757	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Chloroethane	U		0.00210	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
Chloroform	U		0.00127	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Chloromethane	U		0.00538	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
2-Chlorotoluene	U		0.00107	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
4-Chlorotoluene	U		0.000557	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,2-Dibromo-3-Chloropropane	U		0.00482	0.0250	0.0309	1	01/30/2021 07:50	WG1613619
1,2-Dibromoethane	U		0.000801	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Dibromomethane	U		0.000928	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,2-Dichlorobenzene	U		0.000526	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,3-Dichlorobenzene	U		0.000742	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,4-Dichlorobenzene	U		0.000866	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
Dichlorodifluoromethane	U		0.00199	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
1,1-Dichloroethane	U		0.000607	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
1,2-Dichloroethane	U		0.000803	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
1,1-Dichloroethene	U		0.000750	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
cis-1,2-Dichloroethene	U		0.000908	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
trans-1,2-Dichloroethene	U		0.00129	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,2-Dichloropropane	U		0.00176	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,1-Dichloropropene	U		0.00100	0.00250	0.00309	1	01/30/2021 07:50	WG1613619

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U	J4	0.000620	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
cis-1,3-Dichloropropene	U		0.000936	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
trans-1,3-Dichloropropene	U		0.00141	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
2,2-Dichloropropane	U		0.00171	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Ethylbenzene	U		0.000912	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Hexachloro-1,3-butadiene	U		0.00742	0.0250	0.0309	1	01/30/2021 07:50	WG1613619
2-Hexanone	U		0.00416	0.0250	0.0309	1	01/30/2021 07:50	WG1613619
Isopropylbenzene	U		0.000526	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
p-Isopropyltoluene	U		0.00315	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
2-Butanone (MEK)	U		0.0785	0.100	0.124	1	01/30/2021 07:50	WG1613619
Methylene Chloride	U		0.00821	0.0250	0.0309	1	01/30/2021 07:50	WG1613619
4-Methyl-2-pentanone (MIBK)	U		0.00282	0.0250	0.0309	1	01/30/2021 07:50	WG1613619
Methyl tert-butyl ether	U		0.000433	0.00100	0.00124	1	01/30/2021 07:50	WG1613619
Naphthalene	U		0.00604	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
n-Propylbenzene	U		0.00117	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
Styrene	U		0.000283	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
1,1,1,2-Tetrachloroethane	U		0.00117	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
1,1,2,2-Tetrachloroethane	U	J4	0.000860	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Tetrachloroethene	U		0.00111	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Toluene	0.00184	J	0.00161	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,2,3-Trichlorobenzene	U		0.00907	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
1,2,4-Trichlorobenzene	U		0.00544	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
1,1,1-Trichloroethane	U		0.00114	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
1,1,2-Trichloroethane	U		0.000738	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Trichloroethene	U		0.000722	0.00100	0.00124	1	01/30/2021 07:50	WG1613619
Trichlorofluoromethane	U		0.00102	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
1,2,3-Trichloropropane	U		0.00200	0.0125	0.0155	1	01/30/2021 07:50	WG1613619
1,2,4-Trimethylbenzene	U		0.00195	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
1,3,5-Trimethylbenzene	U		0.00247	0.00500	0.00618	1	01/30/2021 07:50	WG1613619
Vinyl chloride	U		0.00143	0.00250	0.00309	1	01/30/2021 07:50	WG1613619
Xylenes, Total	U		0.00109	0.00650	0.00804	1	01/30/2021 07:50	WG1613619
(S) Toluene-d8	*98.9*				*75.0-131*		*01/30/2021 07:50*	WG1613619
(S) 4-Bromofluorobenzene	*99.0*				*67.0-138*		*01/30/2021 07:50*	WG1613619
(S) 1,2-Dichloroethane-d4	*93.9*				*70.0-130*		*01/30/2021 07:50*	WG1613619

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.6	50.0	55.4	1	02/03/2021 00:20	WG1614595
TPH C12 - C28	U		16.6	50.0	55.4	1	02/03/2021 00:20	WG1614595
TPH C28 - C35	U		16.6	50.0	55.4	1	02/03/2021 00:20	WG1614595
TPH C6 - C35	U		16.6	50.0	55.4	1	02/03/2021 00:20	WG1614595
(S) o-Terphenyl	*109*				*70.0-130*		*02/03/2021 00:20*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0119	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Acenaphthylene	U		0.0104	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Anthracene	U		0.0131	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Benzo(a)anthracene	U		0.0130	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Benzo(b)fluoranthene	U		0.0138	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Benzo(k)fluoranthene	U		0.0131	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Benzo(g,h,i)perylene	U		0.0135	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Benzo(a)pyrene	U		0.0137	0.0333	0.0738	2	02/02/2021 18:42	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.261	1.67	3.70	2	02/02/2021 18:42	WG1614392
Benzyl alcohol	U		0.0273	0.333	0.738	2	02/02/2021 18:42	WG1614392
Bis(2-chlorethoxy)methane	U		0.0222	0.333	0.738	2	02/02/2021 18:42	WG1614392
Bis(2-chloroethyl)ether	U		0.0244	0.333	0.738	2	02/02/2021 18:42	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0319	0.333	0.738	2	02/02/2021 18:42	WG1614392
4-Bromophenyl-phenylether	U		0.0259	0.333	0.738	2	02/02/2021 18:42	WG1614392
Carbazole	U		0.0228	0.333	0.738	2	02/02/2021 18:42	WG1614392
2-Chloronaphthalene	U		0.0130	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
4-Chloroaniline	U		0.0266	0.333	0.738	2	02/02/2021 18:42	WG1614392
4-Chlorophenyl-phenylether	U		0.0257	0.333	0.738	2	02/02/2021 18:42	WG1614392
Chrysene	U		0.0147	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Dibenz(a,h)anthracene	U		0.0205	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Dibenzofuran	U		0.0242	0.333	0.738	2	02/02/2021 18:42	WG1614392
3,3-Dichlorobenzidine	U		0.0273	0.333	0.738	2	02/02/2021 18:42	WG1614392
2,4-Dinitrotoluene	U		0.0212	0.333	0.738	2	02/02/2021 18:42	WG1614392
2,6-Dinitrotoluene	U		0.0242	0.333	0.738	2	02/02/2021 18:42	WG1614392
Fluoranthene	U		0.0133	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Fluorene	U		0.0120	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Hexachlorobenzene	U		0.0261	0.333	0.738	2	02/02/2021 18:42	WG1614392
Hexachloro-1,3-butadiene	U		0.0248	0.333	0.738	2	02/02/2021 18:42	WG1614392
Hexachlorocyclopentadiene	U		0.0388	0.333	0.738	2	02/02/2021 18:42	WG1614392
Hexachloroethane	U		0.0290	0.333	0.738	2	02/02/2021 18:42	WG1614392
Indeno(1,2,3-cd)pyrene	U		0.0209	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Isophorone	U		0.0226	0.333	0.738	2	02/02/2021 18:42	WG1614392
2-Methylnaphthalene	U		0.00957	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Naphthalene	U		0.0185	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
2-Nitroaniline	U		0.0237	0.333	0.738	2	02/02/2021 18:42	WG1614392
3-Nitroaniline	U		0.0235	0.333	0.738	2	02/02/2021 18:42	WG1614392
4-Nitroaniline	U		0.0215	0.333	0.738	2	02/02/2021 18:42	WG1614392
Nitrobenzene	U		0.0257	0.333	0.738	2	02/02/2021 18:42	WG1614392
n-Nitrosodimethylamine	U		0.109	0.333	0.738	2	02/02/2021 18:42	WG1614392
n-Nitrosodiphenylamine	U		0.0558	0.333	0.738	2	02/02/2021 18:42	WG1614392
n-Nitrosodi-n-propylamine	U		0.0246	0.333	0.738	2	02/02/2021 18:42	WG1614392
Phenanthrene	U		0.0146	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Benzylbutyl phthalate	U		0.0230	0.333	0.738	2	02/02/2021 18:42	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0935	0.333	0.738	2	02/02/2021 18:42	WG1614392
Di-n-butyl phthalate	U		0.0253	0.333	0.738	2	02/02/2021 18:42	WG1614392
Diethyl phthalate	U		0.0244	0.333	0.738	2	02/02/2021 18:42	WG1614392
Dimethyl phthalate	U		0.156	0.333	0.738	2	02/02/2021 18:42	WG1614392
Di-n-octyl phthalate	U		0.0499	0.333	0.738	2	02/02/2021 18:42	WG1614392
Pyrene	U		0.0144	0.0333	0.0738	2	02/02/2021 18:42	WG1614392
Pyridine	U		0.0487	0.333	0.738	2	02/02/2021 18:42	WG1614392
1,2,4-Trichlorobenzene	U		0.0230	0.333	0.738	2	02/02/2021 18:42	WG1614392
4-Chloro-3-methylphenol	U		0.0239	0.333	0.738	2	02/02/2021 18:42	WG1614392
2-Chlorophenol	U		0.0244	0.333	0.738	2	02/02/2021 18:42	WG1614392
2,4-Dichlorophenol	U		0.0215	0.333	0.738	2	02/02/2021 18:42	WG1614392
2,4-Dimethylphenol	U		0.0193	0.333	0.738	2	02/02/2021 18:42	WG1614392
4,6-Dinitro-2-methylphenol	U		0.167	0.333	0.738	2	02/02/2021 18:42	WG1614392
2,4-Dinitrophenol	U		0.173	0.333	0.738	2	02/02/2021 18:42	WG1614392
2-Methylphenol	U		0.0222	0.333	0.738	2	02/02/2021 18:42	WG1614392
3&4-Methyl Phenol	U		0.0230	0.333	0.738	2	02/02/2021 18:42	WG1614392
2-Nitrophenol	U		0.0264	0.333	0.738	2	02/02/2021 18:42	WG1614392
4-Nitrophenol	U		0.0230	0.333	0.738	2	02/02/2021 18:42	WG1614392
Pentachlorophenol	U		0.0199	0.333	0.738	2	02/02/2021 18:42	WG1614392
Phenol	U		0.0297	0.333	0.738	2	02/02/2021 18:42	WG1614392
2,4,5-Trichlorophenol	U		0.0250	0.333	0.738	2	02/02/2021 18:42	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0237	0.333	0.738	2	02/02/2021 18:42	WG1614392
(S) 2-Fluorophenol	*70.6*				*12.0-120*		*02/02/2021 18:42*	WG1614392
(S) Phenol-d5	*63.0*				*10.0-120*		*02/02/2021 18:42*	WG1614392
(S) Nitrobenzene-d5	*59.7*				*10.0-122*		*02/02/2021 18:42*	WG1614392
(S) 2-Fluorobiphenyl	*66.1*				*15.0-120*		*02/02/2021 18:42*	WG1614392
(S) 2,4,6-Tribromophenol	*78.6*				*10.0-127*		*02/02/2021 18:42*	WG1614392
(S) p-Terphenyl-d14	*73.6*				*10.0-120*		*02/02/2021 18:42*	WG1614392

Sample Narrative:

L1311179-06 WG1614392: Dilution due to matrix impact during extraction procedure

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.7		1	02/03/2021 14:57	WG1614563

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0409	J	0.0205	0.0400	0.0456	1	02/03/2021 09:36	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	4.49		0.590	2.00	2.28	1	02/03/2021 01:10	WG1613801
Barium	127		0.0971	0.500	0.570	1	02/03/2021 01:10	WG1613801
Cadmium	0.732		0.0537	0.500	0.570	1	02/03/2021 01:10	WG1613801
Chromium	16.0		0.152	1.00	1.14	1	02/03/2021 01:10	WG1613801
Lead	114		0.237	0.500	0.570	1	02/03/2021 01:10	WG1613801
Selenium	1.39	J	0.871	2.00	2.28	1	02/03/2021 01:10	WG1613801
Silver	U		0.145	1.00	1.14	1	02/03/2021 01:10	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0687	0.0500	0.0942	1.53	01/30/2021 08:09	WG1613619
Benzene	U		0.000880	0.00100	0.00188	1.53	01/30/2021 08:09	WG1613619
Bromobenzene	U		0.00170	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
Bromochloromethane	U		0.00106	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
Bromodichloromethane	U		0.00137	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Bromoform	U		0.00220	0.0250	0.0471	1.53	01/30/2021 08:09	WG1613619
Bromomethane	U		0.00371	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
n-Butylbenzene	U		0.00989	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
sec-Butylbenzene	U		0.00542	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
tert-Butylbenzene	U		0.00367	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
Carbon disulfide	U		0.00132	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
Carbon tetrachloride	U		0.00169	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
Chlorobenzene	U		0.000396	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Chlorodibromomethane	U		0.00115	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Chloroethane	U		0.00320	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
Chloroform	U		0.00194	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Chloromethane	U		0.00819	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
2-Chlorotoluene	U		0.00163	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
4-Chlorotoluene	U		0.000848	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,2-Dibromo-3-Chloropropane	U		0.00735	0.0250	0.0471	1.53	01/30/2021 08:09	WG1613619
1,2-Dibromoethane	U		0.00122	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Dibromomethane	U		0.00141	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,2-Dichlorobenzene	U		0.000800	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,3-Dichlorobenzene	U		0.00113	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,4-Dichlorobenzene	U		0.00132	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
Dichlorodifluoromethane	U		0.00303	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
1,1-Dichloroethane	U		0.000925	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
1,2-Dichloroethane	U		0.00122	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
1,1-Dichloroethene	U		0.00114	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
cis-1,2-Dichloroethene	U		0.00138	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
trans-1,2-Dichloroethene	U		0.00196	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,2-Dichloropropane	U		0.00267	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,1-Dichloropropene	U		0.00152	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U	J4	0.000944	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
cis-1,3-Dichloropropene	U		0.00143	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
trans-1,3-Dichloropropene	U		0.00215	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
2,2-Dichloropropane	U		0.00260	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Ethylbenzene	0.00183	J	0.00139	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Hexachloro-1,3-butadiene	U		0.0113	0.0250	0.0471	1.53	01/30/2021 08:09	WG1613619
2-Hexanone	U		0.00633	0.0250	0.0471	1.53	01/30/2021 08:09	WG1613619
Isopropylbenzene	U		0.000800	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
p-Isopropyltoluene	U		0.00480	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
2-Butanone (MEK)	U		0.120	0.100	0.188	1.53	01/30/2021 08:09	WG1613619
Methylene Chloride	U		0.0125	0.0250	0.0471	1.53	01/30/2021 08:09	WG1613619
4-Methyl-2-pentanone (MIBK)	U		0.00429	0.0250	0.0471	1.53	01/30/2021 08:09	WG1613619
Methyl tert-butyl ether	U		0.000659	0.00100	0.00188	1.53	01/30/2021 08:09	WG1613619
Naphthalene	U		0.00919	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
n-Propylbenzene	U		0.00179	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
Styrene	U		0.000431	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
1,1,1,2-Tetrachloroethane	U		0.00179	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
1,1,2,2-Tetrachloroethane	U	J4	0.00131	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Tetrachloroethene	U		0.00169	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Toluene	0.00343	J	0.00245	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,2,3-Trichlorobenzene	U		0.0138	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
1,2,4-Trichlorobenzene	U		0.00829	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
1,1,1-Trichloroethane	U		0.00174	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
1,1,2-Trichloroethane	U		0.00112	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Trichloroethene	U		0.00110	0.00100	0.00188	1.53	01/30/2021 08:09	WG1613619
Trichlorofluoromethane	U		0.00156	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
1,2,3-Trichloropropane	U		0.00305	0.0125	0.0235	1.53	01/30/2021 08:09	WG1613619
1,2,4-Trimethylbenzene	U		0.00298	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
1,3,5-Trimethylbenzene	U		0.00377	0.00500	0.00942	1.53	01/30/2021 08:09	WG1613619
Vinyl chloride	U		0.00218	0.00250	0.00471	1.53	01/30/2021 08:09	WG1613619
Xylenes, Total	0.0151		0.00166	0.00650	0.0122	1.53	01/30/2021 08:09	WG1613619
(S) Toluene-d8	*95.9*				*75.0-131*		*01/30/2021 08:09*	WG1613619
(S) 4-Bromofluorobenzene	*99.1*				*67.0-138*		*01/30/2021 08:09*	WG1613619
(S) 1,2-Dichloroethane-d4	*93.1*				*70.0-130*		*01/30/2021 08:09*	WG1613619

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		23.2	50.0	77.5	1.36	02/03/2021 00:34	WG1614595
TPH C12 - C28	U		23.2	50.0	77.5	1.36	02/03/2021 00:34	WG1614595
TPH C28 - C35	U		23.2	50.0	77.5	1.36	02/03/2021 00:34	WG1614595
TPH C6 - C35	U		23.2	50.0	77.5	1.36	02/03/2021 00:34	WG1614595
(S) o-Terphenyl	*109*				*70.0-130*		*02/03/2021 00:34*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00614	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Acenaphthylene	0.00707	J	0.00534	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Anthracene	U		0.00676	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Benzo(a)anthracene	0.0140	J	0.00669	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Benzo(b)fluoranthene	0.0285	J	0.00708	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Benzo(k)fluoranthene	U		0.00675	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Benzo(g,h,i)perylene	0.0161	J	0.00694	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Benzo(a)pyrene	0.0155	J	0.00705	0.0333	0.0380	1	02/01/2021 20:17	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.134	1.67	1.90	1	02/01/2021 20:17	WG1614392
Benzyl alcohol	U		0.0140	0.333	0.380	1	02/01/2021 20:17	WG1614392
Bis(2-chlorethoxy)methane	U		0.0114	0.333	0.380	1	02/01/2021 20:17	WG1614392
Bis(2-chloroethyl)ether	U		0.0125	0.333	0.380	1	02/01/2021 20:17	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0164	0.333	0.380	1	02/01/2021 20:17	WG1614392
4-Bromophenyl-phenylether	U		0.0133	0.333	0.380	1	02/01/2021 20:17	WG1614392
Carbazole	U		0.0117	0.333	0.380	1	02/01/2021 20:17	WG1614392
2-Chloronaphthalene	U		0.00667	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
4-Chloroaniline	U		0.0137	0.333	0.380	1	02/01/2021 20:17	WG1614392
4-Chlorophenyl-phenylether	U		0.0132	0.333	0.380	1	02/01/2021 20:17	WG1614392
Chrysene	0.0106	J	0.00754	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Dibenz(a,h)anthracene	U		0.0105	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Dibenzofuran	U		0.0124	0.333	0.380	1	02/01/2021 20:17	WG1614392
3,3-Dichlorobenzidine	U		0.0140	0.333	0.380	1	02/01/2021 20:17	WG1614392
2,4-Dinitrotoluene	U		0.0109	0.333	0.380	1	02/01/2021 20:17	WG1614392
2,6-Dinitrotoluene	U		0.0124	0.333	0.380	1	02/01/2021 20:17	WG1614392
Fluoranthene	0.0168	J	0.00685	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Fluorene	U		0.00618	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Hexachlorobenzene	U		0.0134	0.333	0.380	1	02/01/2021 20:17	WG1614392
Hexachloro-1,3-butadiene	U		0.0128	0.333	0.380	1	02/01/2021 20:17	WG1614392
Hexachlorocyclopentadiene	U		0.0199	0.333	0.380	1	02/01/2021 20:17	WG1614392
Hexachloroethane	U		0.0149	0.333	0.380	1	02/01/2021 20:17	WG1614392
Indeno(1,2,3-cd)pyrene	U		0.0107	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Isophorone	U		0.0116	0.333	0.380	1	02/01/2021 20:17	WG1614392
2-Methylnaphthalene	U		0.00492	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Naphthalene	U		0.00953	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
2-Nitroaniline	U		0.0122	0.333	0.380	1	02/01/2021 20:17	WG1614392
3-Nitroaniline	U		0.0121	0.333	0.380	1	02/01/2021 20:17	WG1614392
4-Nitroaniline	U		0.0111	0.333	0.380	1	02/01/2021 20:17	WG1614392
Nitrobenzene	U		0.0132	0.333	0.380	1	02/01/2021 20:17	WG1614392
n-Nitrosodimethylamine	U		0.0563	0.333	0.380	1	02/01/2021 20:17	WG1614392
n-Nitrosodiphenylamine	U		0.0287	0.333	0.380	1	02/01/2021 20:17	WG1614392
n-Nitrosodi-n-propylamine	U		0.0127	0.333	0.380	1	02/01/2021 20:17	WG1614392
Phenanthrene	0.00881	J	0.00753	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Benzylbutyl phthalate	U		0.0119	0.333	0.380	1	02/01/2021 20:17	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0481	0.333	0.380	1	02/01/2021 20:17	WG1614392
Di-n-butyl phthalate	U		0.0130	0.333	0.380	1	02/01/2021 20:17	WG1614392
Diethyl phthalate	U		0.0125	0.333	0.380	1	02/01/2021 20:17	WG1614392
Dimethyl phthalate	U		0.0805	0.333	0.380	1	02/01/2021 20:17	WG1614392
Di-n-octyl phthalate	U		0.0256	0.333	0.380	1	02/01/2021 20:17	WG1614392
Pyrene	0.0199	J	0.00738	0.0333	0.0380	1	02/01/2021 20:17	WG1614392
Pyridine	U		0.0251	0.333	0.380	1	02/01/2021 20:17	WG1614392
1,2,4-Trichlorobenzene	U		0.0119	0.333	0.380	1	02/01/2021 20:17	WG1614392
4-Chloro-3-methylphenol	U		0.0123	0.333	0.380	1	02/01/2021 20:17	WG1614392
2-Chlorophenol	U		0.0125	0.333	0.380	1	02/01/2021 20:17	WG1614392
2,4-Dichlorophenol	U		0.0111	0.333	0.380	1	02/01/2021 20:17	WG1614392
2,4-Dimethylphenol	U		0.00991	0.333	0.380	1	02/01/2021 20:17	WG1614392
4,6-Dinitro-2-methylphenol	U		0.0860	0.333	0.380	1	02/01/2021 20:17	WG1614392
2,4-Dinitrophenol	U		0.0888	0.333	0.380	1	02/01/2021 20:17	WG1614392
2-Methylphenol	U		0.0114	0.333	0.380	1	02/01/2021 20:17	WG1614392
3&4-Methyl Phenol	U		0.0119	0.333	0.380	1	02/01/2021 20:17	WG1614392
2-Nitrophenol	U		0.0136	0.333	0.380	1	02/01/2021 20:17	WG1614392
4-Nitrophenol	U		0.0119	0.333	0.380	1	02/01/2021 20:17	WG1614392
Pentachlorophenol	U		0.0102	0.333	0.380	1	02/01/2021 20:17	WG1614392
Phenol	U		0.0153	0.333	0.380	1	02/01/2021 20:17	WG1614392
2,4,5-Trichlorophenol	U		0.0129	0.333	0.380	1	02/01/2021 20:17	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0122	0.333	0.380	1	02/01/2021 20:17	WG1614392
(S) 2-Fluorophenol	*63.9*				*12.0-120*		*02/01/2021 20:17*	WG1614392
(S) Phenol-d5	*58.8*				*10.0-120*		*02/01/2021 20:17*	WG1614392
(S) Nitrobenzene-d5	*55.9*				*10.0-122*		*02/01/2021 20:17*	WG1614392
(S) 2-Fluorobiphenyl	*60.7*				*15.0-120*		*02/01/2021 20:17*	WG1614392
(S) 2,4,6-Tribromophenol	*64.4*				*10.0-127*		*02/01/2021 20:17*	WG1614392
(S) p-Terphenyl-d14	*65.6*				*10.0-120*		*02/01/2021 20:17*	WG1614392

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.0		1	02/03/2021 14:57	WG1614563

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.35	T8	1	02/02/2021 00:57	WG1614203

Sample Narrative:

L1311179-08 WG1614203: 8.35 at 20.6C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0683		0.0205	0.0400	0.0455	1	02/03/2021 09:38	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	4.34		0.589	2.00	2.27	1	02/03/2021 01:13	WG1613801
Barium	67.2		0.0969	0.500	0.568	1	02/03/2021 01:13	WG1613801
Cadmium	0.118	J	0.0536	0.500	0.568	1	02/03/2021 01:13	WG1613801
Chromium	8.39		0.151	1.00	1.14	1	02/03/2021 01:13	WG1613801
Lead	66.8		0.236	0.500	0.568	1	02/03/2021 01:13	WG1613801
Selenium	1.06	J	0.869	2.00	2.27	1	02/03/2021 01:13	WG1613801
Silver	U		0.144	1.00	1.14	1	02/03/2021 01:13	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0511	0.0500	0.0699	1	01/30/2021 05:32	WG1613622
Benzene	U		0.000653	0.00100	0.00140	1	01/30/2021 05:32	WG1613622
Bromobenzene	U		0.00126	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
Bromochloromethane	U		0.000789	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
Bromodichloromethane	U		0.00101	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Bromoform	U		0.00164	0.0250	0.0350	1	01/30/2021 05:32	WG1613622
Bromomethane	U		0.00276	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
n-Butylbenzene	U		0.00734	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
sec-Butylbenzene	U		0.00403	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
tert-Butylbenzene	U		0.00273	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
Carbon disulfide	U		0.000979	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
Carbon tetrachloride	U		0.00126	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
Chlorobenzene	U		0.000294	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Chlorodibromomethane	U		0.000856	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Chloroethane	U		0.00238	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
Chloroform	U		0.00144	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Chloromethane	U		0.00609	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
2-Chlorotoluene	U		0.00121	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
4-Chlorotoluene	U		0.000630	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00546	0.0250	0.0350	1	01/30/2021 05:32	WG1613622
1,2-Dibromoethane	U		0.000907	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Dibromomethane	U		0.00105	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,2-Dichlorobenzene	U		0.000595	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,3-Dichlorobenzene	U		0.000839	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,4-Dichlorobenzene	U		0.000979	0.00500	0.00699	1	01/30/2021 05:32	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00225	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
1,1-Dichloroethane	U		0.000687	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
1,2-Dichloroethane	U		0.000908	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
1,1-Dichloroethene	U		0.000848	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
cis-1,2-Dichloroethene	U		0.00103	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00145	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,2-Dichloropropane	U		0.00199	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,1-Dichloropropene	U		0.00113	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
1,3-Dichloropropane	U		0.000701	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
cis-1,3-Dichloropropene	U		0.00106	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
trans-1,3-Dichloropropene	U		0.00159	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
2,2-Dichloropropane	U		0.00193	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Ethylbenzene	U		0.00103	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Hexachloro-1,3-butadiene	U		0.00839	0.0250	0.0350	1	01/30/2021 05:32	WG1613622
2-Hexanone	U		0.00470	0.0250	0.0350	1	01/30/2021 05:32	WG1613622
Isopropylbenzene	U		0.000595	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
p-Isopropyltoluene	U		0.00357	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
2-Butanone (MEK)	U		0.0888	0.100	0.140	1	01/30/2021 05:32	WG1613622
Methylene Chloride	U		0.00929	0.0250	0.0350	1	01/30/2021 05:32	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00319	0.0250	0.0350	1	01/30/2021 05:32	WG1613622
Methyl tert-butyl ether	U		0.000490	0.00100	0.00140	1	01/30/2021 05:32	WG1613622
Naphthalene	U		0.00683	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
n-Propylbenzene	U		0.00133	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
Styrene	U		0.000320	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00133	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
1,1,2,2-Tetrachloroethane	U		0.000972	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Tetrachloroethene	U		0.00125	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Toluene	U		0.00182	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,2,3-Trichlorobenzene	U		0.0103	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
1,2,4-Trichlorobenzene	U		0.00616	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
1,1,1-Trichloroethane	U	J4	0.00129	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
1,1,2-Trichloroethane	U		0.000835	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Trichloroethene	U	J4	0.000817	0.00100	0.00140	1	01/30/2021 05:32	WG1613622
Trichlorofluoromethane	U		0.00116	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
1,2,3-Trichloropropane	U		0.00227	0.0125	0.0175	1	01/30/2021 05:32	WG1613622
1,2,4-Trimethylbenzene	U		0.00221	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
1,3,5-Trimethylbenzene	U		0.00280	0.00500	0.00699	1	01/30/2021 05:32	WG1613622
Vinyl chloride	U		0.00162	0.00250	0.00350	1	01/30/2021 05:32	WG1613622
Xylenes, Total	0.00326	J	0.00123	0.00650	0.00909	1	01/30/2021 05:32	WG1613622
(S) Toluene-d8	*103*				*75.0-131*		*01/30/2021 05:32*	WG1613622
(S) 4-Bromofluorobenzene	*99.4*				*67.0-138*		*01/30/2021 05:32*	WG1613622
(S) 1,2-Dichloroethane-d4	*92.5*				*70.0-130*		*01/30/2021 05:32*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		17.1	50.0	56.8	1	02/03/2021 00:48	WG1614595
TPH C12 - C28	U		17.1	50.0	56.8	1	02/03/2021 00:48	WG1614595
TPH C28 - C35	U		17.1	50.0	56.8	1	02/03/2021 00:48	WG1614595
TPH C6 - C35	U		17.1	50.0	56.8	1	02/03/2021 00:48	WG1614595
(S) o-Terphenyl	*110*				*70.0-130*		*02/03/2021 00:48*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00613	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Acenaphthylene	0.0244	J	0.00533	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Anthracene	0.0409		0.00674	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Benzo(a)anthracene	0.0537		0.00667	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Benzo(b)fluoranthene	0.146		0.00706	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Benzo(k)fluoranthene	0.0390		0.00673	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Benzo(g,h,i)perylene	U		0.00692	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Benzo(a)pyrene	0.0716		0.00704	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Benzoic acid	U		0.134	1.67	1.90	1	02/01/2021 20:41	WG1614392
Benzyl alcohol	U		0.0140	0.333	0.379	1	02/01/2021 20:41	WG1614392
Bis(2-chlorethoxy)methane	U		0.0114	0.333	0.379	1	02/01/2021 20:41	WG1614392
Bis(2-chloroethyl)ether	U		0.0125	0.333	0.379	1	02/01/2021 20:41	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0164	0.333	0.379	1	02/01/2021 20:41	WG1614392
4-Bromophenyl-phenylether	U		0.0133	0.333	0.379	1	02/01/2021 20:41	WG1614392
Carbazole	0.0288	J	0.0117	0.333	0.379	1	02/01/2021 20:41	WG1614392
2-Chloronaphthalene	U		0.00665	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
4-Chloroaniline	U		0.0136	0.333	0.379	1	02/01/2021 20:41	WG1614392
4-Chlorophenyl-phenylether	U		0.0132	0.333	0.379	1	02/01/2021 20:41	WG1614392
Chrysene	0.0647		0.00753	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Dibenz(a,h)anthracene	U		0.0105	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Dibenzofuran	U		0.0124	0.333	0.379	1	02/01/2021 20:41	WG1614392
3,3-Dichlorobenzidine	U		0.0140	0.333	0.379	1	02/01/2021 20:41	WG1614392
2,4-Dinitrotoluene	U		0.0109	0.333	0.379	1	02/01/2021 20:41	WG1614392
2,6-Dinitrotoluene	U		0.0124	0.333	0.379	1	02/01/2021 20:41	WG1614392
Fluoranthene	0.101		0.00683	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Fluorene	U		0.00616	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Hexachlorobenzene	U		0.0134	0.333	0.379	1	02/01/2021 20:41	WG1614392
Hexachloro-1,3-butadiene	U		0.0127	0.333	0.379	1	02/01/2021 20:41	WG1614392
Hexachlorocyclopentadiene	U		0.0199	0.333	0.379	1	02/01/2021 20:41	WG1614392
Hexachloroethane	U		0.0149	0.333	0.379	1	02/01/2021 20:41	WG1614392
Indeno(1,2,3-cd)pyrene	0.0523		0.0107	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Isophorone	U		0.0116	0.333	0.379	1	02/01/2021 20:41	WG1614392
2-Methylnaphthalene	0.00930	J	0.00491	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Naphthalene	0.0121	J	0.00951	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
2-Nitroaniline	U		0.0122	0.333	0.379	1	02/01/2021 20:41	WG1614392
3-Nitroaniline	U		0.0121	0.333	0.379	1	02/01/2021 20:41	WG1614392
4-Nitroaniline	U		0.0110	0.333	0.379	1	02/01/2021 20:41	WG1614392
Nitrobenzene	U		0.0132	0.333	0.379	1	02/01/2021 20:41	WG1614392
n-Nitrosodimethylamine	U		0.0562	0.333	0.379	1	02/01/2021 20:41	WG1614392
n-Nitrosodiphenylamine	U		0.0287	0.333	0.379	1	02/01/2021 20:41	WG1614392
n-Nitrosodi-n-propylamine	U		0.0126	0.333	0.379	1	02/01/2021 20:41	WG1614392
Phenanthrene	0.0484		0.00752	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Benzylbutyl phthalate	U		0.0118	0.333	0.379	1	02/01/2021 20:41	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0480	0.333	0.379	1	02/01/2021 20:41	WG1614392
Di-n-butyl phthalate	U		0.0130	0.333	0.379	1	02/01/2021 20:41	WG1614392
Diethyl phthalate	U		0.0125	0.333	0.379	1	02/01/2021 20:41	WG1614392
Dimethyl phthalate	U		0.0803	0.333	0.379	1	02/01/2021 20:41	WG1614392
Di-n-octyl phthalate	U		0.0256	0.333	0.379	1	02/01/2021 20:41	WG1614392
Pyrene	0.117		0.00737	0.0333	0.0379	1	02/01/2021 20:41	WG1614392
Pyridine	U		0.0250	0.333	0.379	1	02/01/2021 20:41	WG1614392
1,2,4-Trichlorobenzene	U		0.0118	0.333	0.379	1	02/01/2021 20:41	WG1614392
4-Chloro-3-methylphenol	U		0.0123	0.333	0.379	1	02/01/2021 20:41	WG1614392
2-Chlorophenol	U		0.0125	0.333	0.379	1	02/01/2021 20:41	WG1614392
2,4-Dichlorophenol	U		0.0110	0.333	0.379	1	02/01/2021 20:41	WG1614392
2,4-Dimethylphenol	U		0.00989	0.333	0.379	1	02/01/2021 20:41	WG1614392
4,6-Dinitro-2-methylphenol	U		0.0858	0.333	0.379	1	02/01/2021 20:41	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dinitrophenol	U		0.0886	0.333	0.379	1	02/01/2021 20:41	WG1614392
2-Methylphenol	U		0.0114	0.333	0.379	1	02/01/2021 20:41	WG1614392
3&4-Methyl Phenol	U		0.0118	0.333	0.379	1	02/01/2021 20:41	WG1614392
2-Nitrophenol	U		0.0135	0.333	0.379	1	02/01/2021 20:41	WG1614392
4-Nitrophenol	U		0.0118	0.333	0.379	1	02/01/2021 20:41	WG1614392
Pentachlorophenol	U		0.0102	0.333	0.379	1	02/01/2021 20:41	WG1614392
Phenol	U		0.0152	0.333	0.379	1	02/01/2021 20:41	WG1614392
2,4,5-Trichlorophenol	U		0.0128	0.333	0.379	1	02/01/2021 20:41	WG1614392
2,4,6-Trichlorophenol	U		0.0122	0.333	0.379	1	02/01/2021 20:41	WG1614392
(S) 2-Fluorophenol	*57.2*				*12.0-120*		*02/01/2021 20:41*	WG1614392
(S) Phenol-d5	*52.4*				*10.0-120*		*02/01/2021 20:41*	WG1614392
(S) Nitrobenzene-d5	*50.6*				*10.0-122*		*02/01/2021 20:41*	WG1614392
(S) 2-Fluorobiphenyl	*53.3*				*15.0-120*		*02/01/2021 20:41*	WG1614392
(S) 2,4,6-Tribromophenol	*58.9*				*10.0-127*		*02/01/2021 20:41*	WG1614392
(S) p-Terphenyl-d14	*65.4*				*10.0-120*		*02/01/2021 20:41*	WG1614392

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.4		1	02/03/2021 14:57	WG1614563

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0827		0.0197	0.0400	0.0438	1	02/03/2021 09:41	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	U		0.567	2.00	2.19	1	02/03/2021 01:16	WG1613801
Barium	71.8		0.0932	0.500	0.547	1	02/03/2021 01:16	WG1613801
Cadmium	0.193	J	0.0515	0.500	0.547	1	02/03/2021 01:16	WG1613801
Chromium	10.9		0.146	1.00	1.09	1	02/03/2021 01:16	WG1613801
Lead	43.2		0.228	0.500	0.547	1	02/03/2021 01:16	WG1613801
Selenium	U		0.836	2.00	2.19	1	02/03/2021 01:16	WG1613801
Silver	U		0.139	1.00	1.09	1	02/03/2021 01:16	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0618	0.0500	0.0846	1.46	01/30/2021 05:51	WG1613622
Benzene	U		0.000790	0.00100	0.00169	1.46	01/30/2021 05:51	WG1613622
Bromobenzene	U		0.00152	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
Bromochloromethane	U		0.000954	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
Bromodichloromethane	U		0.00123	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Bromoform	U		0.00198	0.0250	0.0423	1.46	01/30/2021 05:51	WG1613622
Bromomethane	U		0.00333	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
n-Butylbenzene	U		0.00888	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
sec-Butylbenzene	U		0.00487	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
tert-Butylbenzene	U		0.00330	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
Carbon disulfide	U		0.00118	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
Carbon tetrachloride	U		0.00152	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
Chlorobenzene	U		0.000355	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Chlorodibromomethane	U		0.00104	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Chloroethane	U		0.00288	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
Chloroform	U		0.00174	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Chloromethane	U		0.00736	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
2-Chlorotoluene	U		0.00146	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
4-Chlorotoluene	U		0.000762	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00660	0.0250	0.0423	1.46	01/30/2021 05:51	WG1613622
1,2-Dibromoethane	U		0.00110	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Dibromomethane	U		0.00127	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,2-Dichlorobenzene	U		0.000719	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,3-Dichlorobenzene	U		0.00102	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,4-Dichlorobenzene	U		0.00118	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
Dichlorodifluoromethane	U		0.00272	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
1,1-Dichloroethane	U		0.000831	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
1,2-Dichloroethane	U		0.00110	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
1,1-Dichloroethene	U		0.00103	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
cis-1,2-Dichloroethene	U		0.00124	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00176	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,2-Dichloropropane	U		0.00240	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,1-Dichloropropene	U		0.00137	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000848	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
cis-1,3-Dichloropropene	U		0.00128	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
trans-1,3-Dichloropropene	U		0.00193	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
2,2-Dichloropropane	U		0.00234	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Ethylbenzene	U		0.00125	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Hexachloro-1,3-butadiene	U		0.0102	0.0250	0.0423	1.46	01/30/2021 05:51	WG1613622
2-Hexanone	U		0.00569	0.0250	0.0423	1.46	01/30/2021 05:51	WG1613622
Isopropylbenzene	U		0.000719	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
p-Isopropyltoluene	U		0.00432	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
2-Butanone (MEK)	U		0.107	0.100	0.169	1.46	01/30/2021 05:51	WG1613622
Methylene Chloride	U		0.0112	0.0250	0.0423	1.46	01/30/2021 05:51	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00386	0.0250	0.0423	1.46	01/30/2021 05:51	WG1613622
Methyl tert-butyl ether	U		0.000592	0.00100	0.00169	1.46	01/30/2021 05:51	WG1613622
Naphthalene	U		0.00826	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
n-Propylbenzene	U		0.00161	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
Styrene	U		0.000388	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00160	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
1,1,2,2-Tetrachloroethane	U		0.00118	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Tetrachloroethene	U		0.00152	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Toluene	0.00571	B J	0.00220	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,2,3-Trichlorobenzene	U		0.0124	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
1,2,4-Trichlorobenzene	U		0.00745	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
1,1,1-Trichloroethane	U	J4	0.00156	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
1,1,2-Trichloroethane	U		0.00101	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Trichloroethene	U	J4	0.000988	0.00100	0.00169	1.46	01/30/2021 05:51	WG1613622
Trichlorofluoromethane	U		0.00140	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
1,2,3-Trichloropropane	U		0.00274	0.0125	0.0212	1.46	01/30/2021 05:51	WG1613622
1,2,4-Trimethylbenzene	U		0.00267	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
1,3,5-Trimethylbenzene	U		0.00338	0.00500	0.00846	1.46	01/30/2021 05:51	WG1613622
Vinyl chloride	U		0.00196	0.00250	0.00423	1.46	01/30/2021 05:51	WG1613622
Xylenes, Total	0.00567	J	0.00149	0.00650	0.0110	1.46	01/30/2021 05:51	WG1613622
(S) Toluene-d8	*102*				*75.0-131*		*01/30/2021 05:51*	WG1613622
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*01/30/2021 05:51*	WG1613622
(S) 1,2-Dichloroethane-d4	*92.4*				*70.0-130*		*01/30/2021 05:51*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		25.0	50.0	83.2	1.52	02/03/2021 01:03	WG1614595
TPH C12 - C28	U		25.0	50.0	83.2	1.52	02/03/2021 01:03	WG1614595
TPH C28 - C35	U		25.0	50.0	83.2	1.52	02/03/2021 01:03	WG1614595
TPH C6 - C35	U		25.0	50.0	83.2	1.52	02/03/2021 01:03	WG1614595
(S) o-Terphenyl	*107*				*70.0-130*		*02/03/2021 01:03*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0118	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Acenaphthylene	U		0.0103	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Anthracene	U		0.0130	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Benzo(a)anthracene	0.0461	J	0.0128	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Benzo(b)fluoranthene	0.0749		0.0136	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Benzo(k)fluoranthene	0.0219	J	0.0130	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Benzo(g,h,i)perylene	0.0506	J	0.0133	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Benzo(a)pyrene	0.0490	J	0.0135	0.0333	0.0729	2	02/02/2021 19:03	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.258	1.67	3.66	2	02/02/2021 19:03	WG1614392
Benzyl alcohol	U		0.0269	0.333	0.729	2	02/02/2021 19:03	WG1614392
Bis(2-chlorethoxy)methane	U		0.0219	0.333	0.729	2	02/02/2021 19:03	WG1614392
Bis(2-chloroethyl)ether	U		0.0241	0.333	0.729	2	02/02/2021 19:03	WG1614392
2,2-Oxybis(1-Chloropropane)	U		0.0315	0.333	0.729	2	02/02/2021 19:03	WG1614392
4-Bromophenyl-phenylether	U		0.0256	0.333	0.729	2	02/02/2021 19:03	WG1614392
Carbazole	U		0.0225	0.333	0.729	2	02/02/2021 19:03	WG1614392
2-Chloronaphthalene	U		0.0128	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
4-Chloroaniline	U		0.0263	0.333	0.729	2	02/02/2021 19:03	WG1614392
4-Chlorophenyl-phenylether	U		0.0254	0.333	0.729	2	02/02/2021 19:03	WG1614392
Chrysene	0.0436	J	0.0145	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Dibenz(a,h)anthracene	U		0.0202	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Dibenzofuran	U		0.0239	0.333	0.729	2	02/02/2021 19:03	WG1614392
3,3-Dichlorobenzidine	U		0.0269	0.333	0.729	2	02/02/2021 19:03	WG1614392
2,4-Dinitrotoluene	U		0.0209	0.333	0.729	2	02/02/2021 19:03	WG1614392
2,6-Dinitrotoluene	U		0.0239	0.333	0.729	2	02/02/2021 19:03	WG1614392
Fluoranthene	0.0695	J	0.0132	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Fluorene	U		0.0119	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Hexachlorobenzene	U		0.0258	0.333	0.729	2	02/02/2021 19:03	WG1614392
Hexachloro-1,3-butadiene	U		0.0245	0.333	0.729	2	02/02/2021 19:03	WG1614392
Hexachlorocyclopentadiene	U		0.0383	0.333	0.729	2	02/02/2021 19:03	WG1614392
Hexachloroethane	U		0.0287	0.333	0.729	2	02/02/2021 19:03	WG1614392
Indeno(1,2,3-cd)pyrene	0.0395	J	0.0206	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Isophorone	U		0.0223	0.333	0.729	2	02/02/2021 19:03	WG1614392
2-Methylnaphthalene	U		0.00946	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Naphthalene	U		0.0183	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
2-Nitroaniline	U		0.0234	0.333	0.729	2	02/02/2021 19:03	WG1614392
3-Nitroaniline	U		0.0232	0.333	0.729	2	02/02/2021 19:03	WG1614392
4-Nitroaniline	U		0.0213	0.333	0.729	2	02/02/2021 19:03	WG1614392
Nitrobenzene	U		0.0254	0.333	0.729	2	02/02/2021 19:03	WG1614392
n-Nitrosodimethylamine	U		0.108	0.333	0.729	2	02/02/2021 19:03	WG1614392
n-Nitrosodiphenylamine	U		0.0552	0.333	0.729	2	02/02/2021 19:03	WG1614392
n-Nitrosodi-n-propylamine	U		0.0243	0.333	0.729	2	02/02/2021 19:03	WG1614392
Phenanthrene	0.0289	J	0.0145	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Benzylbutyl phthalate	U		0.0228	0.333	0.729	2	02/02/2021 19:03	WG1614392
Bis(2-ethylhexyl)phthalate	U		0.0924	0.333	0.729	2	02/02/2021 19:03	WG1614392
Di-n-butyl phthalate	U		0.0250	0.333	0.729	2	02/02/2021 19:03	WG1614392
Diethyl phthalate	U		0.0241	0.333	0.729	2	02/02/2021 19:03	WG1614392
Dimethyl phthalate	U		0.155	0.333	0.729	2	02/02/2021 19:03	WG1614392
Di-n-octyl phthalate	U		0.0492	0.333	0.729	2	02/02/2021 19:03	WG1614392
Pyrene	0.0686	J	0.0142	0.0333	0.0729	2	02/02/2021 19:03	WG1614392
Pyridine	U		0.0482	0.333	0.729	2	02/02/2021 19:03	WG1614392
1,2,4-Trichlorobenzene	U		0.0228	0.333	0.729	2	02/02/2021 19:03	WG1614392
4-Chloro-3-methylphenol	U		0.0236	0.333	0.729	2	02/02/2021 19:03	WG1614392
2-Chlorophenol	U		0.0241	0.333	0.729	2	02/02/2021 19:03	WG1614392
2,4-Dichlorophenol	U		0.0212	0.333	0.729	2	02/02/2021 19:03	WG1614392
2,4-Dimethylphenol	U		0.0190	0.333	0.729	2	02/02/2021 19:03	WG1614392
4,6-Dinitro-2-methylphenol	U		0.165	0.333	0.729	2	02/02/2021 19:03	WG1614392
2,4-Dinitrophenol	U		0.171	0.333	0.729	2	02/02/2021 19:03	WG1614392
2-Methylphenol	U		0.0219	0.333	0.729	2	02/02/2021 19:03	WG1614392
3&4-Methyl Phenol	U		0.0228	0.333	0.729	2	02/02/2021 19:03	WG1614392
2-Nitrophenol	U		0.0260	0.333	0.729	2	02/02/2021 19:03	WG1614392
4-Nitrophenol	U		0.0228	0.333	0.729	2	02/02/2021 19:03	WG1614392
Pentachlorophenol	U		0.0196	0.333	0.729	2	02/02/2021 19:03	WG1614392
Phenol	U		0.0293	0.333	0.729	2	02/02/2021 19:03	WG1614392
2,4,5-Trichlorophenol	U		0.0247	0.333	0.729	2	02/02/2021 19:03	WG1614392

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0234	0.333	0.729	2	02/02/2021 19:03	WG1614392
(S) 2-Fluorophenol	*66.9*				*12.0-120*		*02/02/2021 19:03*	WG1614392
(S) Phenol-d5	*61.7*				*10.0-120*		*02/02/2021 19:03*	WG1614392
(S) Nitrobenzene-d5	*58.0*				*10.0-122*		*02/02/2021 19:03*	WG1614392
(S) 2-Fluorobiphenyl	*62.2*				*15.0-120*		*02/02/2021 19:03*	WG1614392
(S) 2,4,6-Tribromophenol	*77.3*				*10.0-127*		*02/02/2021 19:03*	WG1614392
(S) p-Terphenyl-d14	*73.4*				*10.0-120*		*02/02/2021 19:03*	WG1614392

Sample Narrative:

L1311179-09 WG1614392: Dilution due to matrix impact during extraction procedure

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.7		1	02/03/2021 14:57	WG1614563

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.153		0.0205	0.0400	0.0456	1	02/03/2021 09:43	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	35.6		0.591	2.00	2.28	1	02/03/2021 01:19	WG1613801
Barium	304		0.0972	0.500	0.570	1	02/03/2021 01:19	WG1613801
Cadmium	1.66		0.0537	0.500	0.570	1	02/03/2021 01:19	WG1613801
Chromium	32.3		0.152	1.00	1.14	1	02/03/2021 01:19	WG1613801
Lead	219		0.237	0.500	0.570	1	02/03/2021 01:19	WG1613801
Selenium	1.45	J	0.871	2.00	2.28	1	02/03/2021 01:19	WG1613801
Silver	0.193	J	0.145	1.00	1.14	1	02/03/2021 01:19	WG1613801

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0476	0.0500	0.0652	1	01/30/2021 06:10	WG1613622
Benzene	U		0.000609	0.00100	0.00130	1	01/30/2021 06:10	WG1613622
Bromobenzene	U		0.00117	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
Bromochloromethane	U		0.000735	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
Bromodichloromethane	U		0.000945	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Bromoform	U		0.00153	0.0250	0.0326	1	01/30/2021 06:10	WG1613622
Bromomethane	U		0.00257	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
n-Butylbenzene	U		0.00684	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
sec-Butylbenzene	U		0.00375	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
tert-Butylbenzene	U		0.00254	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
Carbon disulfide	U		0.000913	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
Carbon tetrachloride	U		0.00117	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
Chlorobenzene	U		0.000274	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Chlorodibromomethane	U		0.000798	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Chloroethane	U		0.00222	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
Chloroform	U		0.00134	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Chloromethane	U		0.00567	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
2-Chlorotoluene	U		0.00113	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
4-Chlorotoluene	U		0.000587	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00508	0.0250	0.0326	1	01/30/2021 06:10	WG1613622
1,2-Dibromoethane	U		0.000845	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Dibromomethane	U		0.000978	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,2-Dichlorobenzene	U		0.000554	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,3-Dichlorobenzene	U		0.000782	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,4-Dichlorobenzene	U		0.000913	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
Dichlorodifluoromethane	U		0.00210	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
1,1-Dichloroethane	U		0.000640	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
1,2-Dichloroethane	U		0.000846	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
1,1-Dichloroethene	U		0.000790	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
cis-1,2-Dichloroethene	U		0.000957	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00136	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,2-Dichloropropane	U		0.00185	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,1-Dichloropropene	U		0.00105	0.00250	0.00326	1	01/30/2021 06:10	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000653	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
cis-1,3-Dichloropropene	U		0.000987	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
trans-1,3-Dichloropropene	U		0.00149	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
2,2-Dichloropropane	U		0.00180	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Ethylbenzene	0.00553		0.000961	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Hexachloro-1,3-butadiene	U		0.00782	0.0250	0.0326	1	01/30/2021 06:10	WG1613622
2-Hexanone	U		0.00438	0.0250	0.0326	1	01/30/2021 06:10	WG1613622
Isopropylbenzene	0.000897	J	0.000554	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
p-Isopropyltoluene	U		0.00332	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
2-Butanone (MEK)	U		0.0828	0.100	0.130	1	01/30/2021 06:10	WG1613622
Methylene Chloride	U		0.00866	0.0250	0.0326	1	01/30/2021 06:10	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00297	0.0250	0.0326	1	01/30/2021 06:10	WG1613622
Methyl tert-butyl ether	U		0.000456	0.00100	0.00130	1	01/30/2021 06:10	WG1613622
Naphthalene	0.00787	J	0.00636	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
n-Propylbenzene	U		0.00124	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
Styrene	0.000365	J	0.000299	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00124	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
1,1,2,2-Tetrachloroethane	U		0.000906	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Tetrachloroethene	U		0.00117	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Toluene	0.00420	B J	0.00169	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,2,3-Trichlorobenzene	U		0.00956	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
1,2,4-Trichlorobenzene	U		0.00574	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
1,1,1-Trichloroethane	U	J4	0.00120	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
1,1,2-Trichloroethane	U		0.000778	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Trichloroethene	U	J4	0.000761	0.00100	0.00130	1	01/30/2021 06:10	WG1613622
Trichlorofluoromethane	U		0.00108	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
1,2,3-Trichloropropane	U		0.00211	0.0125	0.0163	1	01/30/2021 06:10	WG1613622
1,2,4-Trimethylbenzene	0.00272	B J	0.00206	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
1,3,5-Trimethylbenzene	U		0.00261	0.00500	0.00652	1	01/30/2021 06:10	WG1613622
Vinyl chloride	U		0.00151	0.00250	0.00326	1	01/30/2021 06:10	WG1613622
Xylenes, Total	0.0386		0.00115	0.00650	0.00847	1	01/30/2021 06:10	WG1613622
(S) Toluene-d8	*101*				*75.0-131*		*01/30/2021 06:10*	WG1613622
(S) 4-Bromofluorobenzene	*100*				*67.0-138*		*01/30/2021 06:10*	WG1613622
(S) 1,2-Dichloroethane-d4	*92.1*				*70.0-130*		*01/30/2021 06:10*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		17.1	50.0	57.0	1	02/03/2021 01:18	WG1614595
TPH C12 - C28	U		17.1	50.0	57.0	1	02/03/2021 01:18	WG1614595
TPH C28 - C35	U		17.1	50.0	57.0	1	02/03/2021 01:18	WG1614595
TPH C6 - C35	U		17.1	50.0	57.0	1	02/03/2021 01:18	WG1614595
(S) o-Terphenyl	*108*				*70.0-130*		*02/03/2021 01:18*	WG1614595

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0307	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Acenaphthylene	0.222		0.0267	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Anthracene	0.301		0.0338	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Benzo(a)anthracene	0.252		0.0335	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Benzo(b)fluoranthene	0.836		0.0354	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Benzo(k)fluoranthene	0.247		0.0338	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Benzo(g,h,i)perylene	0.326		0.0347	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Benzo(a)pyrene	0.243		0.0353	0.0333	0.190	5	02/03/2021 01:02	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.673	1.67	9.52	5	02/03/2021 01:02	WG1614577
Benzyl alcohol	U		0.0701	0.333	1.90	5	02/03/2021 01:02	WG1614577
Bis(2-chlorethoxy)methane	U		0.0570	0.333	1.90	5	02/03/2021 01:02	WG1614577
Bis(2-chloroethyl)ether	U		0.0627	0.333	1.90	5	02/03/2021 01:02	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.0821	0.333	1.90	5	02/03/2021 01:02	WG1614577
4-Bromophenyl-phenylether	U		0.0667	0.333	1.90	5	02/03/2021 01:02	WG1614577
Carbazole	0.0930	J	0.0587	0.333	1.90	5	02/03/2021 01:02	WG1614577
2-Chloronaphthalene	U		0.0334	0.0333	0.190	5	02/03/2021 01:02	WG1614577
4-Chloroaniline	U		0.0684	0.333	1.90	5	02/03/2021 01:02	WG1614577
4-Chlorophenyl-phenylether	U		0.0662	0.333	1.90	5	02/03/2021 01:02	WG1614577
Chrysene	0.336		0.0378	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Dibenz(a,h)anthracene	U		0.0526	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Dibenzofuran	U		0.0622	0.333	1.90	5	02/03/2021 01:02	WG1614577
3,3-Dichlorobenzidine	U		0.0701	0.333	1.90	5	02/03/2021 01:02	WG1614577
2,4-Dinitrotoluene	U		0.0545	0.333	1.90	5	02/03/2021 01:02	WG1614577
2,6-Dinitrotoluene	U		0.0622	0.333	1.90	5	02/03/2021 01:02	WG1614577
Fluoranthene	0.526		0.0343	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Fluorene	U		0.0309	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Hexachlorobenzene	U		0.0673	0.333	1.90	5	02/03/2021 01:02	WG1614577
Hexachloro-1,3-butadiene	U		0.0639	0.333	1.90	5	02/03/2021 01:02	WG1614577
Hexachlorocyclopentadiene	U		0.0998	0.333	1.90	5	02/03/2021 01:02	WG1614577
Hexachloroethane	U		0.0747	0.333	1.90	5	02/03/2021 01:02	WG1614577
Indeno(1,2,3-cd)pyrene	0.278		0.0537	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Isophorone	U		0.0582	0.333	1.90	5	02/03/2021 01:02	WG1614577
2-Methylnaphthalene	U		0.0246	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Naphthalene	U		0.0477	0.0333	0.190	5	02/03/2021 01:02	WG1614577
2-Nitroaniline	U		0.0610	0.333	1.90	5	02/03/2021 01:02	WG1614577
3-Nitroaniline	U		0.0604	0.333	1.90	5	02/03/2021 01:02	WG1614577
4-Nitroaniline	U		0.0554	0.333	1.90	5	02/03/2021 01:02	WG1614577
Nitrobenzene	U		0.0662	0.333	1.90	5	02/03/2021 01:02	WG1614577
n-Nitrosodimethylamine	U		0.282	0.333	1.90	5	02/03/2021 01:02	WG1614577
n-Nitrosodiphenylamine	U		0.144	0.333	1.90	5	02/03/2021 01:02	WG1614577
n-Nitrosodi-n-propylamine	U		0.0633	0.333	1.90	5	02/03/2021 01:02	WG1614577
Phenanthrene	0.0898	J	0.0377	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Benzylbutyl phthalate	0.0763	J	0.0593	0.333	1.90	5	02/03/2021 01:02	WG1614577
Bis(2-ethylhexyl)phthalate	U		0.241	0.333	1.90	5	02/03/2021 01:02	WG1614577
Di-n-butyl phthalate	U		0.0650	0.333	1.90	5	02/03/2021 01:02	WG1614577
Diethyl phthalate	U		0.0627	0.333	1.90	5	02/03/2021 01:02	WG1614577
Dimethyl phthalate	U		0.403	0.333	1.90	5	02/03/2021 01:02	WG1614577
Di-n-octyl phthalate	U		0.128	0.333	1.90	5	02/03/2021 01:02	WG1614577
Pyrene	0.618		0.0370	0.0333	0.190	5	02/03/2021 01:02	WG1614577
Pyridine	U		0.125	0.333	1.90	5	02/03/2021 01:02	WG1614577
1,2,4-Trichlorobenzene	U		0.0593	0.333	1.90	5	02/03/2021 01:02	WG1614577
4-Chloro-3-methylphenol	U		0.0616	0.333	1.90	5	02/03/2021 01:02	WG1614577
2-Chlorophenol	U		0.0627	0.333	1.90	5	02/03/2021 01:02	WG1614577
2,4-Dichlorophenol	U		0.0553	0.333	1.90	5	02/03/2021 01:02	WG1614577
2,4-Dimethylphenol	U		0.0496	0.333	1.90	5	02/03/2021 01:02	WG1614577
4,6-Dinitro-2-methylphenol	U		0.431	0.333	1.90	5	02/03/2021 01:02	WG1614577
2,4-Dinitrophenol	U		0.444	0.333	1.90	5	02/03/2021 01:02	WG1614577
2-Methylphenol	U		0.0570	0.333	1.90	5	02/03/2021 01:02	WG1614577
3&4-Methyl Phenol	U		0.0593	0.333	1.90	5	02/03/2021 01:02	WG1614577
2-Nitrophenol	U		0.0679	0.333	1.90	5	02/03/2021 01:02	WG1614577
4-Nitrophenol	U		0.0593	0.333	1.90	5	02/03/2021 01:02	WG1614577
Pentachlorophenol	U		0.0511	0.333	1.90	5	02/03/2021 01:02	WG1614577
Phenol	U		0.0764	0.333	1.90	5	02/03/2021 01:02	WG1614577
2,4,5-Trichlorophenol	U		0.0644	0.333	1.90	5	02/03/2021 01:02	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0610	0.333	1.90	5	02/03/2021 01:02	WG1614577
(S) 2-Fluorophenol	*51.7*				*12.0-120*		*02/03/2021 01:02*	WG1614577
(S) Phenol-d5	*48.3*				*10.0-120*		*02/03/2021 01:02*	WG1614577
(S) Nitrobenzene-d5	*43.3*				*10.0-122*		*02/03/2021 01:02*	WG1614577
(S) 2-Fluorobiphenyl	*46.3*				*15.0-120*		*02/03/2021 01:02*	WG1614577
(S) 2,4,6-Tribromophenol	*45.9*				*10.0-127*		*02/03/2021 01:02*	WG1614577
(S) p-Terphenyl-d14	*50.6*				*10.0-120*		*02/03/2021 01:02*	WG1614577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.9		1	02/03/2021 14:57	WG1614563

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.09	T8	1	02/02/2021 00:57	WG1614203

Sample Narrative:

L1311179-11 WG1614203: 8.09 at 19.8C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.125		0.0240	0.0400	0.0534	1	02/03/2021 09:46	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	7.92		0.692	2.00	2.67	1	01/30/2021 19:24	WG1613802
Barium	310		0.114	0.500	0.668	1	01/30/2021 19:24	WG1613802
Cadmium	2.31		0.0629	0.500	0.668	1	01/30/2021 19:24	WG1613802
Chromium	28.1		0.178	1.00	1.34	1	01/30/2021 19:24	WG1613802
Lead	207		0.278	0.500	0.668	1	01/30/2021 19:24	WG1613802
Selenium	1.39	J	1.02	2.00	2.67	1	01/30/2021 19:24	WG1613802
Silver	0.181	J	0.170	1.00	1.34	1	01/30/2021 19:24	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0677	0.0500	0.0928	1	01/30/2021 06:29	WG1613622
Benzene	U		0.000867	0.00100	0.00186	1	01/30/2021 06:29	WG1613622
Bromobenzene	U		0.00167	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
Bromochloromethane	U		0.00105	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
Bromodichloromethane	U		0.00135	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Bromoform	U		0.00217	0.0250	0.0464	1	01/30/2021 06:29	WG1613622
Bromomethane	U		0.00366	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
n-Butylbenzene	U		0.00974	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
sec-Butylbenzene	U		0.00535	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
tert-Butylbenzene	U		0.00362	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
Carbon disulfide	U		0.00130	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
Carbon tetrachloride	U		0.00167	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
Chlorobenzene	U		0.000390	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Chlorodibromomethane	U		0.00114	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Chloroethane	U		0.00316	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
Chloroform	U		0.00191	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Chloromethane	U		0.00807	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
2-Chlorotoluene	U		0.00161	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
4-Chlorotoluene	U		0.000835	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00724	0.0250	0.0464	1	01/30/2021 06:29	WG1613622
1,2-Dibromoethane	U		0.00120	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Dibromomethane	U		0.00139	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,2-Dichlorobenzene	U		0.000789	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,3-Dichlorobenzene	U		0.00111	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,4-Dichlorobenzene	U		0.00130	0.00500	0.00928	1	01/30/2021 06:29	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00299	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
1,1-Dichloroethane	U		0.000911	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
1,2-Dichloroethane	U		0.00120	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
1,1-Dichloroethene	U		0.00112	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
cis-1,2-Dichloroethene	U		0.00136	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00193	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,2-Dichloropropane	U		0.00264	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,1-Dichloropropene	U		0.00150	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
1,3-Dichloropropane	U		0.000930	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
cis-1,3-Dichloropropene	U		0.00140	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
trans-1,3-Dichloropropene	U		0.00212	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
2,2-Dichloropropane	U		0.00256	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Ethylbenzene	U		0.00137	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Hexachloro-1,3-butadiene	U		0.0111	0.0250	0.0464	1	01/30/2021 06:29	WG1613622
2-Hexanone	U		0.00624	0.0250	0.0464	1	01/30/2021 06:29	WG1613622
Isopropylbenzene	U		0.000789	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
p-Isopropyltoluene	U		0.00473	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
2-Butanone (MEK)	U		0.118	0.100	0.186	1	01/30/2021 06:29	WG1613622
Methylene Chloride	U		0.0123	0.0250	0.0464	1	01/30/2021 06:29	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00423	0.0250	0.0464	1	01/30/2021 06:29	WG1613622
Methyl tert-butyl ether	U		0.000650	0.00100	0.00186	1	01/30/2021 06:29	WG1613622
Naphthalene	U		0.00906	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
n-Propylbenzene	U		0.00176	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
Styrene	U		0.000425	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00176	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
1,1,2,2-Tetrachloroethane	U		0.00129	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Tetrachloroethene	U		0.00166	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Toluene	U		0.00241	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,2,3-Trichlorobenzene	U		0.0136	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
1,2,4-Trichlorobenzene	U		0.00817	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
1,1,1-Trichloroethane	U	J4	0.00171	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
1,1,2-Trichloroethane	U		0.00111	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Trichloroethene	U	J4	0.00108	0.00100	0.00186	1	01/30/2021 06:29	WG1613622
Trichlorofluoromethane	U		0.00153	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
1,2,3-Trichloropropane	U		0.00301	0.0125	0.0232	1	01/30/2021 06:29	WG1613622
1,2,4-Trimethylbenzene	U		0.00293	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
1,3,5-Trimethylbenzene	U		0.00371	0.00500	0.00928	1	01/30/2021 06:29	WG1613622
Vinyl chloride	U		0.00215	0.00250	0.00464	1	01/30/2021 06:29	WG1613622
Xylenes, Total	0.00538	J	0.00163	0.00650	0.0121	1	01/30/2021 06:29	WG1613622
(S) Toluene-d8	*101*				*75.0-131*		*01/30/2021 06:29*	WG1613622
(S) 4-Bromofluorobenzene	*104*				*67.0-138*		*01/30/2021 06:29*	WG1613622
(S) 1,2-Dichloroethane-d4	*94.9*				*70.0-130*		*01/30/2021 06:29*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		20.0	50.0	66.8	1	02/03/2021 17:49	WG1615114
TPH C12 - C28	U		20.0	50.0	66.8	1	02/03/2021 17:49	WG1615114
TPH C28 - C35	U		20.0	50.0	66.8	1	02/03/2021 17:49	WG1615114
TPH C6 - C35	U		20.0	50.0	66.8	1	02/03/2021 17:49	WG1615114
(S) o-Terphenyl	*80.2*				*70.0-130*		*02/03/2021 17:49*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00720	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Acenaphthylene	0.0204	J	0.00626	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Anthracene	0.0319	J	0.00792	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Benzo(a)anthracene	0.0705		0.00784	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Benzo(b)fluoranthene	0.0996		0.00829	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Benzo(k)fluoranthene	0.0323	J	0.00791	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Benzo(g,h,i)perylene	0.0479		0.00813	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Benzo(a)pyrene	0.0556		0.00827	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Benzoic acid	U		0.158	1.67	2.23	1	02/02/2021 23:59	WG1614577
Benzyl alcohol	U		0.0164	0.333	0.445	1	02/02/2021 23:59	WG1614577
Bis(2-chlorethoxy)methane	U		0.0134	0.333	0.445	1	02/02/2021 23:59	WG1614577
Bis(2-chloroethyl)ether	U		0.0147	0.333	0.445	1	02/02/2021 23:59	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.0192	0.333	0.445	1	02/02/2021 23:59	WG1614577
4-Bromophenyl-phenylether	U		0.0156	0.333	0.445	1	02/02/2021 23:59	WG1614577
Carbazole	0.0166	J	0.0138	0.333	0.445	1	02/02/2021 23:59	WG1614577
2-Chloronaphthalene	U		0.00781	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
4-Chloroaniline	U		0.0160	0.333	0.445	1	02/02/2021 23:59	WG1614577
4-Chlorophenyl-phenylether	U		0.0155	0.333	0.445	1	02/02/2021 23:59	WG1614577
Chrysene	0.0769		0.00884	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Dibenz(a,h)anthracene	U		0.0123	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Dibenzofuran	U		0.0146	0.333	0.445	1	02/02/2021 23:59	WG1614577
3,3-Dichlorobenzidine	U		0.0164	0.333	0.445	1	02/02/2021 23:59	WG1614577
2,4-Dinitrotoluene	U		0.0128	0.333	0.445	1	02/02/2021 23:59	WG1614577
2,6-Dinitrotoluene	U		0.0146	0.333	0.445	1	02/02/2021 23:59	WG1614577
Fluoranthene	0.152		0.00803	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Fluorene	U		0.00724	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Hexachlorobenzene	U		0.0158	0.333	0.445	1	02/02/2021 23:59	WG1614577
Hexachloro-1,3-butadiene	U		0.0150	0.333	0.445	1	02/02/2021 23:59	WG1614577
Hexachlorocyclopentadiene	U		0.0234	0.333	0.445	1	02/02/2021 23:59	WG1614577
Hexachloroethane	U		0.0175	0.333	0.445	1	02/02/2021 23:59	WG1614577
Indeno(1,2,3-cd)pyrene	0.0370	J	0.0126	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Isophorone	U		0.0136	0.333	0.445	1	02/02/2021 23:59	WG1614577
2-Methylnaphthalene	U		0.00577	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Naphthalene	U		0.0112	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
2-Nitroaniline	U		0.0143	0.333	0.445	1	02/02/2021 23:59	WG1614577
3-Nitroaniline	U		0.0142	0.333	0.445	1	02/02/2021 23:59	WG1614577
4-Nitroaniline	U		0.0130	0.333	0.445	1	02/02/2021 23:59	WG1614577
Nitrobenzene	U		0.0155	0.333	0.445	1	02/02/2021 23:59	WG1614577
n-Nitrosodimethylamine	U		0.0660	0.333	0.445	1	02/02/2021 23:59	WG1614577
n-Nitrosodiphenylamine	U		0.0337	0.333	0.445	1	02/02/2021 23:59	WG1614577
n-Nitrosodi-n-propylamine	U		0.0148	0.333	0.445	1	02/02/2021 23:59	WG1614577
Phenanthrene	0.0338	J	0.00883	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Benzylbutyl phthalate	U		0.0139	0.333	0.445	1	02/02/2021 23:59	WG1614577
Bis(2-ethylhexyl)phthalate	0.0820	J	0.0564	0.333	0.445	1	02/02/2021 23:59	WG1614577
Di-n-butyl phthalate	0.0180	J	0.0152	0.333	0.445	1	02/02/2021 23:59	WG1614577
Diethyl phthalate	U		0.0147	0.333	0.445	1	02/02/2021 23:59	WG1614577
Dimethyl phthalate	U		0.0943	0.333	0.445	1	02/02/2021 23:59	WG1614577
Di-n-octyl phthalate	U		0.0300	0.333	0.445	1	02/02/2021 23:59	WG1614577
Pyrene	0.176		0.00865	0.0333	0.0445	1	02/02/2021 23:59	WG1614577
Pyridine	U		0.0294	0.333	0.445	1	02/02/2021 23:59	WG1614577
1,2,4-Trichlorobenzene	U		0.0139	0.333	0.445	1	02/02/2021 23:59	WG1614577
4-Chloro-3-methylphenol	U		0.0144	0.333	0.445	1	02/02/2021 23:59	WG1614577
2-Chlorophenol	U		0.0147	0.333	0.445	1	02/02/2021 23:59	WG1614577
2,4-Dichlorophenol	U		0.0130	0.333	0.445	1	02/02/2021 23:59	WG1614577
2,4-Dimethylphenol	U		0.0116	0.333	0.445	1	02/02/2021 23:59	WG1614577
4,6-Dinitro-2-methylphenol	U		0.101	0.333	0.445	1	02/02/2021 23:59	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dinitrophenol	U		0.104	0.333	0.445	1	02/02/2021 23:59	WG1614577
2-Methylphenol	U		0.0134	0.333	0.445	1	02/02/2021 23:59	WG1614577
3&4-Methyl Phenol	U		0.0139	0.333	0.445	1	02/02/2021 23:59	WG1614577
2-Nitrophenol	U		0.0159	0.333	0.445	1	02/02/2021 23:59	WG1614577
4-Nitrophenol	U		0.0139	0.333	0.445	1	02/02/2021 23:59	WG1614577
Pentachlorophenol	U		0.0120	0.333	0.445	1	02/02/2021 23:59	WG1614577
Phenol	U		0.0179	0.333	0.445	1	02/02/2021 23:59	WG1614577
2,4,5-Trichlorophenol	U		0.0151	0.333	0.445	1	02/02/2021 23:59	WG1614577
2,4,6-Trichlorophenol	U		0.0143	0.333	0.445	1	02/02/2021 23:59	WG1614577
(S) 2-Fluorophenol	*78.7*				*12.0-120*		*02/02/2021 23:59*	WG1614577
(S) Phenol-d5	*76.1*				*10.0-120*		*02/02/2021 23:59*	WG1614577
(S) Nitrobenzene-d5	*63.2*				*10.0-122*		*02/02/2021 23:59*	WG1614577
(S) 2-Fluorobiphenyl	*72.7*				*15.0-120*		*02/02/2021 23:59*	WG1614577
(S) 2,4,6-Tribromophenol	*77.9*				*10.0-127*		*02/02/2021 23:59*	WG1614577
(S) p-Terphenyl-d14	*85.3*				*10.0-120*		*02/02/2021 23:59*	WG1614577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.7		1	02/03/2021 14:57	WG1614563

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.214		0.0210	0.0400	0.0467	1	02/03/2021 09:48	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	13.0		0.604	2.00	2.33	1	01/30/2021 19:27	WG1613802
Barium	227		0.0994	0.500	0.583	1	01/30/2021 19:27	WG1613802
Cadmium	1.31		0.0550	0.500	0.583	1	01/30/2021 19:27	WG1613802
Chromium	22.5		0.155	1.00	1.17	1	01/30/2021 19:27	WG1613802
Lead	202		0.243	0.500	0.583	1	01/30/2021 19:27	WG1613802
Selenium	2.56		0.891	2.00	2.33	1	01/30/2021 19:27	WG1613802
Silver	U		0.148	1.00	1.17	1	01/30/2021 19:27	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0725	0.0500	0.0994	1.56	01/30/2021 06:48	WG1613622
Benzene	U		0.000928	0.00100	0.00199	1.56	01/30/2021 06:48	WG1613622
Bromobenzene	U		0.00179	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
Bromochloromethane	U		0.00112	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
Bromodichloromethane	U		0.00144	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Bromoform	U		0.00233	0.0250	0.0497	1.56	01/30/2021 06:48	WG1613622
Bromomethane	U		0.00392	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
n-Butylbenzene	U		0.0104	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
sec-Butylbenzene	U		0.00572	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
tert-Butylbenzene	U		0.00388	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
Carbon disulfide	U		0.00139	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
Carbon tetrachloride	U		0.00178	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
Chlorobenzene	U		0.000417	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Chlorodibromomethane	U		0.00122	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Chloroethane	U		0.00338	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
Chloroform	U		0.00205	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Chloromethane	U		0.00864	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
2-Chlorotoluene	U		0.00172	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
4-Chlorotoluene	U		0.000894	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00775	0.0250	0.0497	1.56	01/30/2021 06:48	WG1613622
1,2-Dibromoethane	U		0.00129	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Dibromomethane	U		0.00149	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,2-Dichlorobenzene	U		0.000845	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,3-Dichlorobenzene	U		0.00119	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,4-Dichlorobenzene	U		0.00139	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
Dichlorodifluoromethane	U		0.00320	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
1,1-Dichloroethane	U		0.000976	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
1,2-Dichloroethane	U		0.00129	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
1,1-Dichloroethene	U		0.00120	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
cis-1,2-Dichloroethene	U		0.00146	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00207	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,2-Dichloropropane	U		0.00282	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,1-Dichloropropene	U		0.00161	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000996	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
cis-1,3-Dichloropropene	U		0.00150	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
trans-1,3-Dichloropropene	U		0.00227	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
2,2-Dichloropropane	U		0.00274	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Ethylbenzene	U		0.00146	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Hexachloro-1,3-butadiene	U		0.0119	0.0250	0.0497	1.56	01/30/2021 06:48	WG1613622
2-Hexanone	U		0.00668	0.0250	0.0497	1.56	01/30/2021 06:48	WG1613622
Isopropylbenzene	U		0.000845	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
p-Isopropyltoluene	U		0.00507	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
2-Butanone (MEK)	U		0.126	0.100	0.199	1.56	01/30/2021 06:48	WG1613622
Methylene Chloride	U		0.0132	0.0250	0.0497	1.56	01/30/2021 06:48	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00453	0.0250	0.0497	1.56	01/30/2021 06:48	WG1613622
Methyl tert-butyl ether	U		0.000696	0.00100	0.00199	1.56	01/30/2021 06:48	WG1613622
Naphthalene	U		0.00970	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
n-Propylbenzene	U		0.00189	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
Styrene	U		0.000455	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00188	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
1,1,2,2-Tetrachloroethane	U		0.00138	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Tetrachloroethene	U		0.00178	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Toluene	0.00581	B J	0.00258	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,2,3-Trichlorobenzene	U		0.0146	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
1,2,4-Trichlorobenzene	U		0.00874	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
1,1,1-Trichloroethane	U	J4	0.00183	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
1,1,2-Trichloroethane	U		0.00119	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Trichloroethene	U	J4	0.00116	0.00100	0.00199	1.56	01/30/2021 06:48	WG1613622
Trichlorofluoromethane	U		0.00164	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
1,2,3-Trichloropropane	U		0.00322	0.0125	0.0248	1.56	01/30/2021 06:48	WG1613622
1,2,4-Trimethylbenzene	U		0.00314	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
1,3,5-Trimethylbenzene	U		0.00397	0.00500	0.00994	1.56	01/30/2021 06:48	WG1613622
Vinyl chloride	U		0.00231	0.00250	0.00497	1.56	01/30/2021 06:48	WG1613622
Xylenes, Total	0.00750	J	0.00175	0.00650	0.0129	1.56	01/30/2021 06:48	WG1613622
(S) Toluene-d8	*101*				*75.0-131*		*01/30/2021 06:48*	WG1613622
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*01/30/2021 06:48*	WG1613622
(S) 1,2-Dichloroethane-d4	*87.4*				*70.0-130*		*01/30/2021 06:48*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		28.9	50.0	96.3	1.65	02/03/2021 18:05	WG1615114
TPH C12 - C28	U		28.9	50.0	96.3	1.65	02/03/2021 18:05	WG1615114
TPH C28 - C35	U		28.9	50.0	96.3	1.65	02/03/2021 18:05	WG1615114
TPH C6 - C35	U		28.9	50.0	96.3	1.65	02/03/2021 18:05	WG1615114
(S) o-Terphenyl	*81.4*				*70.0-130*		*02/03/2021 18:05*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00629	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Acenaphthylene	0.00649	J	0.00547	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Anthracene	0.0117	J	0.00692	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Benzo(a)anthracene	0.0354	J	0.00685	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Benzo(b)fluoranthene	0.0523		0.00725	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Benzo(k)fluoranthene	0.0186	J	0.00691	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Benzo(g,h,i)perylene	0.0295	J	0.00711	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Benzo(a)pyrene	0.0351	J	0.00722	0.0333	0.0389	1	02/02/2021 22:55	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.138	1.67	1.95	1	02/02/2021 22:55	WG1614577
Benzyl alcohol	U		0.0144	0.333	0.389	1	02/02/2021 22:55	WG1614577
Bis(2-chlorethoxy)methane	U		0.0117	0.333	0.389	1	02/02/2021 22:55	WG1614577
Bis(2-chloroethyl)ether	U		0.0128	0.333	0.389	1	02/02/2021 22:55	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.0168	0.333	0.389	1	02/02/2021 22:55	WG1614577
4-Bromophenyl-phenylether	U		0.0137	0.333	0.389	1	02/02/2021 22:55	WG1614577
Carbazole	U		0.0120	0.333	0.389	1	02/02/2021 22:55	WG1614577
2-Chloronaphthalene	U		0.00683	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
4-Chloroaniline	U		0.0140	0.333	0.389	1	02/02/2021 22:55	WG1614577
4-Chlorophenyl-phenylether	U		0.0135	0.333	0.389	1	02/02/2021 22:55	WG1614577
Chrysene	0.0355	J	0.00772	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Dibenz(a,h)anthracene	U		0.0108	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Dibenzofuran	U		0.0127	0.333	0.389	1	02/02/2021 22:55	WG1614577
3,3-Dichlorobenzidine	U		0.0144	0.333	0.389	1	02/02/2021 22:55	WG1614577
2,4-Dinitrotoluene	U		0.0111	0.333	0.389	1	02/02/2021 22:55	WG1614577
2,6-Dinitrotoluene	U		0.0127	0.333	0.389	1	02/02/2021 22:55	WG1614577
Fluoranthene	0.0749		0.00701	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Fluorene	U		0.00632	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Hexachlorobenzene	U		0.0138	0.333	0.389	1	02/02/2021 22:55	WG1614577
Hexachloro-1,3-butadiene	U		0.0131	0.333	0.389	1	02/02/2021 22:55	WG1614577
Hexachlorocyclopentadiene	U		0.0204	0.333	0.389	1	02/02/2021 22:55	WG1614577
Hexachloroethane	U		0.0153	0.333	0.389	1	02/02/2021 22:55	WG1614577
Indeno(1,2,3-cd)pyrene	0.0240	J	0.0110	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Isophorone	U		0.0119	0.333	0.389	1	02/02/2021 22:55	WG1614577
2-Methylnaphthalene	U		0.00504	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Naphthalene	U		0.00975	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
2-Nitroaniline	U		0.0125	0.333	0.389	1	02/02/2021 22:55	WG1614577
3-Nitroaniline	U		0.0124	0.333	0.389	1	02/02/2021 22:55	WG1614577
4-Nitroaniline	U		0.0113	0.333	0.389	1	02/02/2021 22:55	WG1614577
Nitrobenzene	U		0.0135	0.333	0.389	1	02/02/2021 22:55	WG1614577
n-Nitrosodimethylamine	U		0.0576	0.333	0.389	1	02/02/2021 22:55	WG1614577
n-Nitrosodiphenylamine	U		0.0294	0.333	0.389	1	02/02/2021 22:55	WG1614577
n-Nitrosodi-n-propylamine	U		0.0130	0.333	0.389	1	02/02/2021 22:55	WG1614577
Phenanthrene	0.0348	J	0.00771	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Benzylbutyl phthalate	U		0.0121	0.333	0.389	1	02/02/2021 22:55	WG1614577
Bis(2-ethylhexyl)phthalate	U		0.0492	0.333	0.389	1	02/02/2021 22:55	WG1614577
Di-n-butyl phthalate	U		0.0133	0.333	0.389	1	02/02/2021 22:55	WG1614577
Diethyl phthalate	U		0.0128	0.333	0.389	1	02/02/2021 22:55	WG1614577
Dimethyl phthalate	U		0.0824	0.333	0.389	1	02/02/2021 22:55	WG1614577
Di-n-octyl phthalate	U		0.0263	0.333	0.389	1	02/02/2021 22:55	WG1614577
Pyrene	0.0762		0.00756	0.0333	0.0389	1	02/02/2021 22:55	WG1614577
Pyridine	U		0.0257	0.333	0.389	1	02/02/2021 22:55	WG1614577
1,2,4-Trichlorobenzene	U		0.0121	0.333	0.389	1	02/02/2021 22:55	WG1614577
4-Chloro-3-methylphenol	U		0.0126	0.333	0.389	1	02/02/2021 22:55	WG1614577
2-Chlorophenol	U		0.0128	0.333	0.389	1	02/02/2021 22:55	WG1614577
2,4-Dichlorophenol	U		0.0113	0.333	0.389	1	02/02/2021 22:55	WG1614577
2,4-Dimethylphenol	U		0.0102	0.333	0.389	1	02/02/2021 22:55	WG1614577
4,6-Dinitro-2-methylphenol	U		0.0881	0.333	0.389	1	02/02/2021 22:55	WG1614577
2,4-Dinitrophenol	U		0.0909	0.333	0.389	1	02/02/2021 22:55	WG1614577
2-Methylphenol	U		0.0117	0.333	0.389	1	02/02/2021 22:55	WG1614577
3&4-Methyl Phenol	U		0.0121	0.333	0.389	1	02/02/2021 22:55	WG1614577
2-Nitrophenol	U		0.0139	0.333	0.389	1	02/02/2021 22:55	WG1614577
4-Nitrophenol	U		0.0121	0.333	0.389	1	02/02/2021 22:55	WG1614577
Pentachlorophenol	U		0.0105	0.333	0.389	1	02/02/2021 22:55	WG1614577
Phenol	U		0.0156	0.333	0.389	1	02/02/2021 22:55	WG1614577
2,4,5-Trichlorophenol	U		0.0132	0.333	0.389	1	02/02/2021 22:55	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0125	0.333	0.389	1	02/02/2021 22:55	WG1614577
(S) 2-Fluorophenol	*68.1*				*12.0-120*		*02/02/2021 22:55*	WG1614577
(S) Phenol-d5	*63.5*				*10.0-120*		*02/02/2021 22:55*	WG1614577
(S) Nitrobenzene-d5	*55.6*				*10.0-122*		*02/02/2021 22:55*	WG1614577
(S) 2-Fluorobiphenyl	*60.2*				*15.0-120*		*02/02/2021 22:55*	WG1614577
(S) 2,4,6-Tribromophenol	*60.0*				*10.0-127*		*02/02/2021 22:55*	WG1614577
(S) p-Terphenyl-d14	*65.7*				*10.0-120*		*02/02/2021 22:55*	WG1614577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	02/03/2021 14:57	WG1614563

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0657		0.0193	0.0400	0.0428	1	02/03/2021 09:55	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	8.56		0.555	2.00	2.14	1	01/30/2021 19:35	WG1613802
Barium	102		0.0912	0.500	0.535	1	01/30/2021 19:35	WG1613802
Cadmium	1.24		0.0504	0.500	0.535	1	01/30/2021 19:35	WG1613802
Chromium	23.1		0.142	1.00	1.07	1	01/30/2021 19:35	WG1613802
Lead	64.4		0.223	0.500	0.535	1	01/30/2021 19:35	WG1613802
Selenium	1.32	J	0.818	2.00	2.14	1	01/30/2021 19:35	WG1613802
Silver	0.832	J	0.136	1.00	1.07	1	01/30/2021 19:35	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0417	0.0500	0.0571	1	01/30/2021 07:07	WG1613622
Benzene	U		0.000533	0.00100	0.00114	1	01/30/2021 07:07	WG1613622
Bromobenzene	U		0.00103	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
Bromochloromethane	U		0.000644	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
Bromodichloromethane	U		0.000828	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Bromoform	U		0.00134	0.0250	0.0285	1	01/30/2021 07:07	WG1613622
Bromomethane	U		0.00225	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
n-Butylbenzene	U		0.00599	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
sec-Butylbenzene	U		0.00329	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
tert-Butylbenzene	U		0.00223	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
Carbon disulfide	U		0.000799	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
Carbon tetrachloride	U		0.00103	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
Chlorobenzene	U		0.000240	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Chlorodibromomethane	U		0.000699	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Chloroethane	U		0.00194	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
Chloroform	U		0.00118	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Chloromethane	U		0.00497	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
2-Chlorotoluene	U		0.000988	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
4-Chlorotoluene	U		0.000514	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00445	0.0250	0.0285	1	01/30/2021 07:07	WG1613622
1,2-Dibromoethane	U		0.000740	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Dibromomethane	U		0.000856	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,2-Dichlorobenzene	U		0.000485	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,3-Dichlorobenzene	U		0.000685	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,4-Dichlorobenzene	U		0.000799	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
Dichlorodifluoromethane	U		0.00184	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
1,1-Dichloroethane	U		0.000561	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
1,2-Dichloroethane	U		0.000741	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
1,1-Dichloroethene	U		0.000692	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
cis-1,2-Dichloroethene	U		0.000838	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00119	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,2-Dichloropropane	U		0.00162	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,1-Dichloropropene	U		0.000924	0.00250	0.00285	1	01/30/2021 07:07	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000572	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
cis-1,3-Dichloropropene	U		0.000864	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
trans-1,3-Dichloropropene	U		0.00130	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
2,2-Dichloropropane	U		0.00158	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Ethylbenzene	U		0.000841	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Hexachloro-1,3-butadiene	U		0.00685	0.0250	0.0285	1	01/30/2021 07:07	WG1613622
2-Hexanone	U		0.00384	0.0250	0.0285	1	01/30/2021 07:07	WG1613622
Isopropylbenzene	U		0.000485	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
p-Isopropyltoluene	U		0.00291	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
2-Butanone (MEK)	U		0.0725	0.100	0.114	1	01/30/2021 07:07	WG1613622
Methylene Chloride	U		0.00758	0.0250	0.0285	1	01/30/2021 07:07	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00260	0.0250	0.0285	1	01/30/2021 07:07	WG1613622
Methyl tert-butyl ether	U		0.000400	0.00100	0.00114	1	01/30/2021 07:07	WG1613622
Naphthalene	U		0.00557	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
n-Propylbenzene	U		0.00108	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
Styrene	U		0.000261	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00108	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
1,1,2,2-Tetrachloroethane	U		0.000793	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Tetrachloroethene	U		0.00102	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Toluene	0.00374	B J	0.00148	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,2,3-Trichlorobenzene	U		0.00837	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
1,2,4-Trichlorobenzene	U		0.00502	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
1,1,1-Trichloroethane	U	J4	0.00105	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
1,1,2-Trichloroethane	U		0.000682	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Trichloroethene	U	J4	0.000667	0.00100	0.00114	1	01/30/2021 07:07	WG1613622
Trichlorofluoromethane	U		0.000944	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
1,2,3-Trichloropropane	U		0.00185	0.0125	0.0143	1	01/30/2021 07:07	WG1613622
1,2,4-Trimethylbenzene	U		0.00180	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
1,3,5-Trimethylbenzene	U		0.00228	0.00500	0.00571	1	01/30/2021 07:07	WG1613622
Vinyl chloride	U		0.00132	0.00250	0.00285	1	01/30/2021 07:07	WG1613622
Xylenes, Total	0.00537	J	0.00100	0.00650	0.00742	1	01/30/2021 07:07	WG1613622
(S) Toluene-d8	*103*				*75.0-131*		*01/30/2021 07:07*	WG1613622
(S) 4-Bromofluorobenzene	*97.9*				*67.0-138*		*01/30/2021 07:07*	WG1613622
(S) 1,2-Dichloroethane-d4	*90.9*				*70.0-130*		*01/30/2021 07:07*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.1	50.0	53.5	1	02/03/2021 18:20	WG1615114
TPH C12 - C28	U		16.1	50.0	53.5	1	02/03/2021 18:20	WG1615114
TPH C28 - C35	U		16.1	50.0	53.5	1	02/03/2021 18:20	WG1615114
TPH C6 - C35	U		16.1	50.0	53.5	1	02/03/2021 18:20	WG1615114
(S) o-Terphenyl	*81.2*				*70.0-130*		*02/03/2021 18:20*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.00614	J	0.00577	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Acenaphthylene	0.00929	J	0.00502	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Anthracene	0.0228	J	0.00635	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Benzo(a)anthracene	0.130		0.00629	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Benzo(b)fluoranthene	0.180		0.00665	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Benzo(k)fluoranthene	0.0622		0.00634	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Benzo(g,h,i)perylene	0.0708		0.00652	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Benzo(a)pyrene	0.119		0.00663	0.0333	0.0357	1	02/02/2021 23:38	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.126	1.67	1.79	1	02/02/2021 23:38	WG1614577
Benzyl alcohol	U		0.0132	0.333	0.357	1	02/02/2021 23:38	WG1614577
Bis(2-chlorethoxy)methane	U		0.0107	0.333	0.357	1	02/02/2021 23:38	WG1614577
Bis(2-chloroethyl)ether	U		0.0118	0.333	0.357	1	02/02/2021 23:38	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.0154	0.333	0.357	1	02/02/2021 23:38	WG1614577
4-Bromophenyl-phenylether	U		0.0125	0.333	0.357	1	02/02/2021 23:38	WG1614577
Carbazole	0.0110	J	0.0110	0.333	0.357	1	02/02/2021 23:38	WG1614577
2-Chloronaphthalene	U		0.00626	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
4-Chloroaniline	U		0.0128	0.333	0.357	1	02/02/2021 23:38	WG1614577
4-Chlorophenyl-phenylether	U		0.0124	0.333	0.357	1	02/02/2021 23:38	WG1614577
Chrysene	0.125		0.00709	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Dibenz(a,h)anthracene	0.0161	J	0.00988	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Dibenzofuran	U		0.0117	0.333	0.357	1	02/02/2021 23:38	WG1614577
3,3-Dichlorobenzidine	U		0.0132	0.333	0.357	1	02/02/2021 23:38	WG1614577
2,4-Dinitrotoluene	U		0.0102	0.333	0.357	1	02/02/2021 23:38	WG1614577
2,6-Dinitrotoluene	U		0.0117	0.333	0.357	1	02/02/2021 23:38	WG1614577
Fluoranthene	0.202		0.00644	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Fluorene	U		0.00580	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Hexachlorobenzene	U		0.0126	0.333	0.357	1	02/02/2021 23:38	WG1614577
Hexachloro-1,3-butadiene	U		0.0120	0.333	0.357	1	02/02/2021 23:38	WG1614577
Hexachlorocyclopentadiene	U		0.0187	0.333	0.357	1	02/02/2021 23:38	WG1614577
Hexachloroethane	U		0.0140	0.333	0.357	1	02/02/2021 23:38	WG1614577
Indeno(1,2,3-cd)pyrene	0.0708		0.0101	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Isophorone	U		0.0109	0.333	0.357	1	02/02/2021 23:38	WG1614577
2-Methylnaphthalene	0.00543	J	0.00463	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Naphthalene	U		0.00895	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
2-Nitroaniline	U		0.0115	0.333	0.357	1	02/02/2021 23:38	WG1614577
3-Nitroaniline	U		0.0114	0.333	0.357	1	02/02/2021 23:38	WG1614577
4-Nitroaniline	U		0.0104	0.333	0.357	1	02/02/2021 23:38	WG1614577
Nitrobenzene	U		0.0124	0.333	0.357	1	02/02/2021 23:38	WG1614577
n-Nitrosodimethylamine	U		0.0529	0.333	0.357	1	02/02/2021 23:38	WG1614577
n-Nitrosodiphenylamine	U		0.0270	0.333	0.357	1	02/02/2021 23:38	WG1614577
n-Nitrosodi-n-propylamine	U		0.0119	0.333	0.357	1	02/02/2021 23:38	WG1614577
Phenanthrene	0.0784		0.00708	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Benzylbutyl phthalate	U		0.0111	0.333	0.357	1	02/02/2021 23:38	WG1614577
Bis(2-ethylhexyl)phthalate	0.0557	J	0.0452	0.333	0.357	1	02/02/2021 23:38	WG1614577
Di-n-butyl phthalate	U		0.0122	0.333	0.357	1	02/02/2021 23:38	WG1614577
Diethyl phthalate	U		0.0118	0.333	0.357	1	02/02/2021 23:38	WG1614577
Dimethyl phthalate	U		0.0756	0.333	0.357	1	02/02/2021 23:38	WG1614577
Di-n-octyl phthalate	U		0.0241	0.333	0.357	1	02/02/2021 23:38	WG1614577
Pyrene	0.200		0.00694	0.0333	0.0357	1	02/02/2021 23:38	WG1614577
Pyridine	U		0.0236	0.333	0.357	1	02/02/2021 23:38	WG1614577
1,2,4-Trichlorobenzene	U		0.0111	0.333	0.357	1	02/02/2021 23:38	WG1614577
4-Chloro-3-methylphenol	U		0.0116	0.333	0.357	1	02/02/2021 23:38	WG1614577
2-Chlorophenol	U		0.0118	0.333	0.357	1	02/02/2021 23:38	WG1614577
2,4-Dichlorophenol	U		0.0104	0.333	0.357	1	02/02/2021 23:38	WG1614577
2,4-Dimethylphenol	U		0.00932	0.333	0.357	1	02/02/2021 23:38	WG1614577
4,6-Dinitro-2-methylphenol	U		0.0808	0.333	0.357	1	02/02/2021 23:38	WG1614577
2,4-Dinitrophenol	U		0.0834	0.333	0.357	1	02/02/2021 23:38	WG1614577
2-Methylphenol	U		0.0107	0.333	0.357	1	02/02/2021 23:38	WG1614577
3&4-Methyl Phenol	U		0.0111	0.333	0.357	1	02/02/2021 23:38	WG1614577
2-Nitrophenol	U		0.0127	0.333	0.357	1	02/02/2021 23:38	WG1614577
4-Nitrophenol	U		0.0111	0.333	0.357	1	02/02/2021 23:38	WG1614577
Pentachlorophenol	U		0.00959	0.333	0.357	1	02/02/2021 23:38	WG1614577
Phenol	U		0.0143	0.333	0.357	1	02/02/2021 23:38	WG1614577
2,4,5-Trichlorophenol	U		0.0121	0.333	0.357	1	02/02/2021 23:38	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0115	0.333	0.357	1	02/02/2021 23:38	WG1614577
(S) 2-Fluorophenol	*75.0*				*12.0-120*		*02/02/2021 23:38*	WG1614577
(S) Phenol-d5	*70.1*				*10.0-120*		*02/02/2021 23:38*	WG1614577
(S) Nitrobenzene-d5	*64.3*				*10.0-122*		*02/02/2021 23:38*	WG1614577
(S) 2-Fluorobiphenyl	*67.1*				*15.0-120*		*02/02/2021 23:38*	WG1614577
(S) 2,4,6-Tribromophenol	*62.8*				*10.0-127*		*02/02/2021 23:38*	WG1614577
(S) p-Terphenyl-d14	*71.6*				*10.0-120*		*02/02/2021 23:38*	WG1614577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.6		1	02/03/2021 14:57	WG1614563

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.57	T8	1	02/02/2021 00:57	WG1614203

Sample Narrative:

L1311179-14 WG1614203: 8.57 at 20.3C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0739		0.0199	0.0400	0.0442	1	02/03/2021 09:57	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	27.1		0.572	2.00	2.21	1	01/30/2021 19:38	WG1613802
Barium	335		0.0941	0.500	0.552	1	01/30/2021 19:38	WG1613802
Cadmium	1.19		0.0520	0.500	0.552	1	01/30/2021 19:38	WG1613802
Chromium	12.6		0.147	1.00	1.10	1	01/30/2021 19:38	WG1613802
Lead	186		0.230	0.500	0.552	1	01/30/2021 19:38	WG1613802
Selenium	1.19	J	0.843	2.00	2.21	1	01/30/2021 19:38	WG1613802
Silver	U		0.140	1.00	1.10	1	01/30/2021 19:38	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0450	0.0500	0.0616	1	01/30/2021 07:26	WG1613622
Benzene	U		0.000575	0.00100	0.00123	1	01/30/2021 07:26	WG1613622
Bromobenzene	U		0.00111	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
Bromochloromethane	U		0.000695	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
Bromodichloromethane	U		0.000893	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Bromoform	U		0.00144	0.0250	0.0308	1	01/30/2021 07:26	WG1613622
Bromomethane	U		0.00243	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
n-Butylbenzene	U		0.00647	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
sec-Butylbenzene	U		0.00355	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
tert-Butylbenzene	U		0.00240	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
Carbon disulfide	U		0.000862	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
Carbon tetrachloride	U		0.00111	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
Chlorobenzene	U		0.000259	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Chlorodibromomethane	U		0.000754	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Chloroethane	U		0.00209	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
Chloroform	U		0.00127	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Chloromethane	U		0.00536	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
2-Chlorotoluene	U		0.00107	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
4-Chlorotoluene	U		0.000554	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00481	0.0250	0.0308	1	01/30/2021 07:26	WG1613622
1,2-Dibromoethane	U		0.000798	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Dibromomethane	U		0.000924	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,2-Dichlorobenzene	U		0.000524	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,3-Dichlorobenzene	U		0.000739	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,4-Dichlorobenzene	U		0.000862	0.00500	0.00616	1	01/30/2021 07:26	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00198	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
1,1-Dichloroethane	U		0.000605	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
1,2-Dichloroethane	U		0.000800	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
1,1-Dichloroethene	U		0.000747	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
cis-1,2-Dichloroethene	U		0.000904	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00128	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,2-Dichloropropane	U		0.00175	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,1-Dichloropropene	U		0.000997	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
1,3-Dichloropropane	U		0.000617	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
cis-1,3-Dichloropropene	U		0.000933	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
trans-1,3-Dichloropropene	U		0.00140	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
2,2-Dichloropropane	U		0.00170	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Ethylbenzene	U		0.000908	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Hexachloro-1,3-butadiene	U		0.00739	0.0250	0.0308	1	01/30/2021 07:26	WG1613622
2-Hexanone	U		0.00414	0.0250	0.0308	1	01/30/2021 07:26	WG1613622
Isopropylbenzene	U		0.000524	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
p-Isopropyltoluene	0.00367	J	0.00314	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
2-Butanone (MEK)	U		0.0782	0.100	0.123	1	01/30/2021 07:26	WG1613622
Methylene Chloride	U		0.00818	0.0250	0.0308	1	01/30/2021 07:26	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00281	0.0250	0.0308	1	01/30/2021 07:26	WG1613622
Methyl tert-butyl ether	U		0.000431	0.00100	0.00123	1	01/30/2021 07:26	WG1613622
Naphthalene	0.00676	J	0.00601	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
n-Propylbenzene	U		0.00117	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
Styrene	U		0.000282	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00117	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
1,1,2,2-Tetrachloroethane	U		0.000856	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Tetrachloroethene	U		0.00110	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Toluene	U		0.00160	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,2,3-Trichlorobenzene	U		0.00903	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
1,2,4-Trichlorobenzene	U		0.00542	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
1,1,1-Trichloroethane	U	J4	0.00114	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
1,1,2-Trichloroethane	U		0.000736	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Trichloroethene	U	J4	0.000720	0.00100	0.00123	1	01/30/2021 07:26	WG1613622
Trichlorofluoromethane	U		0.00102	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
1,2,3-Trichloropropane	U		0.00200	0.0125	0.0154	1	01/30/2021 07:26	WG1613622
1,2,4-Trimethylbenzene	0.00212	B J	0.00195	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
1,3,5-Trimethylbenzene	U		0.00246	0.00500	0.00616	1	01/30/2021 07:26	WG1613622
Vinyl chloride	U		0.00143	0.00250	0.00308	1	01/30/2021 07:26	WG1613622
Xylenes, Total	0.00290	J	0.00108	0.00650	0.00801	1	01/30/2021 07:26	WG1613622
(S) Toluene-d8	*101*				*75.0-131*		*01/30/2021 07:26*	WG1613622
(S) 4-Bromofluorobenzene	*104*				*67.0-138*		*01/30/2021 07:26*	WG1613622
(S) 1,2-Dichloroethane-d4	*93.8*				*70.0-130*		*01/30/2021 07:26*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.6	50.0	55.2	1	02/03/2021 18:36	WG1615114
TPH C12 - C28	U		16.6	50.0	55.2	1	02/03/2021 18:36	WG1615114
TPH C28 - C35	U		16.6	50.0	55.2	1	02/03/2021 18:36	WG1615114
TPH C6 - C35	U		16.6	50.0	55.2	1	02/03/2021 18:36	WG1615114
(S) o-Terphenyl	*79.1*				*70.0-130*		*02/03/2021 18:36*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0298	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Acenaphthylene	0.0502	J	0.0259	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Anthracene	0.117	J	0.0327	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Benzo(a)anthracene	0.113	J	0.0324	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Benzo(b)fluoranthene	0.253		0.0343	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Benzo(k)fluoranthene	0.0774	J	0.0327	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Benzo(g,h,i)perylene	0.109	J	0.0336	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Benzo(a)pyrene	0.138	J	0.0342	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Benzoic acid	U		0.651	1.67	9.22	5	02/03/2021 02:06	WG1614577
Benzyl alcohol	U		0.0679	0.333	1.84	5	02/03/2021 02:06	WG1614577
Bis(2-chlorethoxy)methane	U		0.0552	0.333	1.84	5	02/03/2021 02:06	WG1614577
Bis(2-chloroethyl)ether	U		0.0607	0.333	1.84	5	02/03/2021 02:06	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.0795	0.333	1.84	5	02/03/2021 02:06	WG1614577
4-Bromophenyl-phenylether	U		0.0646	0.333	1.84	5	02/03/2021 02:06	WG1614577
Carbazole	U		0.0569	0.333	1.84	5	02/03/2021 02:06	WG1614577
2-Chloronaphthalene	U		0.0323	0.0333	0.184	5	02/03/2021 02:06	WG1614577
4-Chloroaniline	U		0.0662	0.333	1.84	5	02/03/2021 02:06	WG1614577
4-Chlorophenyl-phenylether	U		0.0640	0.333	1.84	5	02/03/2021 02:06	WG1614577
Chrysene	0.103	J	0.0365	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Dibenz(a,h)anthracene	U		0.0509	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Dibenzofuran	U		0.0602	0.333	1.84	5	02/03/2021 02:06	WG1614577
3,3-Dichlorobenzidine	U		0.0679	0.333	1.84	5	02/03/2021 02:06	WG1614577
2,4-Dinitrotoluene	U		0.0527	0.333	1.84	5	02/03/2021 02:06	WG1614577
2,6-Dinitrotoluene	U		0.0602	0.333	1.84	5	02/03/2021 02:06	WG1614577
Fluoranthene	0.170	J	0.0332	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Fluorene	U		0.0299	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Hexachlorobenzene	U		0.0651	0.333	1.84	5	02/03/2021 02:06	WG1614577
Hexachloro-1,3-butadiene	U		0.0618	0.333	1.84	5	02/03/2021 02:06	WG1614577
Hexachlorocyclopentadiene	U		0.0966	0.333	1.84	5	02/03/2021 02:06	WG1614577
Hexachloroethane	U		0.0723	0.333	1.84	5	02/03/2021 02:06	WG1614577
Indeno(1,2,3-cd)pyrene	0.0922	J	0.0519	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Isophorone	U		0.0563	0.333	1.84	5	02/03/2021 02:06	WG1614577
2-Methylnaphthalene	U		0.0238	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Naphthalene	U		0.0461	0.0333	0.184	5	02/03/2021 02:06	WG1614577
2-Nitroaniline	U		0.0591	0.333	1.84	5	02/03/2021 02:06	WG1614577
3-Nitroaniline	U		0.0585	0.333	1.84	5	02/03/2021 02:06	WG1614577
4-Nitroaniline	U		0.0536	0.333	1.84	5	02/03/2021 02:06	WG1614577
Nitrobenzene	U		0.0640	0.333	1.84	5	02/03/2021 02:06	WG1614577
n-Nitrosodimethylamine	U		0.273	0.333	1.84	5	02/03/2021 02:06	WG1614577
n-Nitrosodiphenylamine	U		0.139	0.333	1.84	5	02/03/2021 02:06	WG1614577
n-Nitrosodi-n-propylamine	U		0.0613	0.333	1.84	5	02/03/2021 02:06	WG1614577
Phenanthrene	0.0682	J	0.0365	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Benzylbutyl phthalate	U		0.0574	0.333	1.84	5	02/03/2021 02:06	WG1614577
Bis(2-ethylhexyl)phthalate	U		0.233	0.333	1.84	5	02/03/2021 02:06	WG1614577
Di-n-butyl phthalate	U		0.0629	0.333	1.84	5	02/03/2021 02:06	WG1614577
Diethyl phthalate	U		0.0607	0.333	1.84	5	02/03/2021 02:06	WG1614577
Dimethyl phthalate	U		0.390	0.333	1.84	5	02/03/2021 02:06	WG1614577
Di-n-octyl phthalate	U		0.124	0.333	1.84	5	02/03/2021 02:06	WG1614577
Pyrene	0.181	J	0.0358	0.0333	0.184	5	02/03/2021 02:06	WG1614577
Pyridine	U		0.121	0.333	1.84	5	02/03/2021 02:06	WG1614577
1,2,4-Trichlorobenzene	U		0.0574	0.333	1.84	5	02/03/2021 02:06	WG1614577
4-Chloro-3-methylphenol	U		0.0596	0.333	1.84	5	02/03/2021 02:06	WG1614577
2-Chlorophenol	U		0.0607	0.333	1.84	5	02/03/2021 02:06	WG1614577
2,4-Dichlorophenol	U		0.0535	0.333	1.84	5	02/03/2021 02:06	WG1614577
2,4-Dimethylphenol	U		0.0480	0.333	1.84	5	02/03/2021 02:06	WG1614577
4,6-Dinitro-2-methylphenol	U		0.417	0.333	1.84	5	02/03/2021 02:06	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dinitrophenol	U		0.430	0.333	1.84	5	02/03/2021 02:06	WG1614577
2-Methylphenol	U		0.0552	0.333	1.84	5	02/03/2021 02:06	WG1614577
3&4-Methyl Phenol	U		0.0574	0.333	1.84	5	02/03/2021 02:06	WG1614577
2-Nitrophenol	U		0.0657	0.333	1.84	5	02/03/2021 02:06	WG1614577
4-Nitrophenol	U		0.0574	0.333	1.84	5	02/03/2021 02:06	WG1614577
Pentachlorophenol	U		0.0495	0.333	1.84	5	02/03/2021 02:06	WG1614577
Phenol	U		0.0740	0.333	1.84	5	02/03/2021 02:06	WG1614577
2,4,5-Trichlorophenol	U		0.0624	0.333	1.84	5	02/03/2021 02:06	WG1614577
2,4,6-Trichlorophenol	U		0.0591	0.333	1.84	5	02/03/2021 02:06	WG1614577
(S) 2-Fluorophenol	*55.6*				*12.0-120*		*02/03/2021 02:06*	WG1614577
(S) Phenol-d5	*53.5*				*10.0-120*		*02/03/2021 02:06*	WG1614577
(S) Nitrobenzene-d5	*47.1*				*10.0-122*		*02/03/2021 02:06*	WG1614577
(S) 2-Fluorobiphenyl	*52.6*				*15.0-120*		*02/03/2021 02:06*	WG1614577
(S) 2,4,6-Tribromophenol	*52.3*				*10.0-127*		*02/03/2021 02:06*	WG1614577
(S) p-Terphenyl-d14	*57.4*				*10.0-120*		*02/03/2021 02:06*	WG1614577

Sample Narrative:

L1311179-14 WG1614577: Dilution due to matrix.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.8		1	02/03/2021 14:57	WG1614563

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0939		0.0203	0.0400	0.0450	1	02/03/2021 10:00	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	32.0		0.583	2.00	2.25	1	01/30/2021 19:41	WG1613802
Barium	603		0.0959	0.500	0.563	1	01/30/2021 19:41	WG1613802
Cadmium	1.42		0.0530	0.500	0.563	1	01/30/2021 19:41	WG1613802
Chromium	20.8		0.150	1.00	1.13	1	01/30/2021 19:41	WG1613802
Lead	288		0.234	0.500	0.563	1	01/30/2021 19:41	WG1613802
Selenium	1.62	J	0.860	2.00	2.25	1	01/30/2021 19:41	WG1613802
Silver	U		0.143	1.00	1.13	1	01/30/2021 19:41	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0461	0.0500	0.0631	1	01/30/2021 07:46	WG1613622
Benzene	U		0.000589	0.00100	0.00126	1	01/30/2021 07:46	WG1613622
Bromobenzene	U		0.00114	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
Bromochloromethane	U		0.000712	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
Bromodichloromethane	U		0.000915	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Bromoform	U		0.00148	0.0250	0.0315	1	01/30/2021 07:46	WG1613622
Bromomethane	U		0.00249	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
n-Butylbenzene	U		0.00662	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
sec-Butylbenzene	U		0.00363	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
tert-Butylbenzene	U		0.00246	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
Carbon disulfide	U		0.000883	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
Carbon tetrachloride	U		0.00113	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
Chlorobenzene	U		0.000265	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Chlorodibromomethane	U		0.000772	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Chloroethane	U		0.00215	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
Chloroform	U		0.00130	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Chloromethane	U		0.00549	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
2-Chlorotoluene	U		0.00109	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
4-Chlorotoluene	U		0.000568	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00492	0.0250	0.0315	1	01/30/2021 07:46	WG1613622
1,2-Dibromoethane	U		0.000818	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Dibromomethane	U		0.000946	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,2-Dichlorobenzene	U		0.000536	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,3-Dichlorobenzene	U		0.000757	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,4-Dichlorobenzene	U		0.000883	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
Dichlorodifluoromethane	U		0.00203	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
1,1-Dichloroethane	U		0.000620	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
1,2-Dichloroethane	U		0.000819	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
1,1-Dichloroethene	U		0.000765	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
cis-1,2-Dichloroethene	U		0.000926	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00131	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,2-Dichloropropane	U		0.00179	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,1-Dichloropropene	U		0.00102	0.00250	0.00315	1	01/30/2021 07:46	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000632	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
cis-1,3-Dichloropropene	U		0.000955	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
trans-1,3-Dichloropropene	U		0.00144	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
2,2-Dichloropropane	U		0.00174	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Ethylbenzene	U		0.000930	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Hexachloro-1,3-butadiene	U		0.00757	0.0250	0.0315	1	01/30/2021 07:46	WG1613622
2-Hexanone	U		0.00424	0.0250	0.0315	1	01/30/2021 07:46	WG1613622
Isopropylbenzene	0.00230	J	0.000536	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
p-Isopropyltoluene	U		0.00322	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
2-Butanone (MEK)	U		0.0801	0.100	0.126	1	01/30/2021 07:46	WG1613622
Methylene Chloride	U		0.00838	0.0250	0.0315	1	01/30/2021 07:46	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00288	0.0250	0.0315	1	01/30/2021 07:46	WG1613622
Methyl tert-butyl ether	U		0.000442	0.00100	0.00126	1	01/30/2021 07:46	WG1613622
Naphthalene	0.0447		0.00616	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
n-Propylbenzene	0.00154	J	0.00120	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
Styrene	U		0.000289	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00120	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
1,1,2,2-Tetrachloroethane	U		0.000877	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Tetrachloroethene	U		0.00113	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Toluene	U		0.00164	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,2,3-Trichlorobenzene	U		0.00925	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
1,2,4-Trichlorobenzene	U		0.00555	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
1,1,1-Trichloroethane	U	J4	0.00116	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
1,1,2-Trichloroethane	U		0.000753	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Trichloroethene	U	J4	0.000737	0.00100	0.00126	1	01/30/2021 07:46	WG1613622
Trichlorofluoromethane	U		0.00104	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
1,2,3-Trichloropropane	U		0.00204	0.0125	0.0158	1	01/30/2021 07:46	WG1613622
1,2,4-Trimethylbenzene	0.00299	B J	0.00199	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
1,3,5-Trimethylbenzene	U		0.00252	0.00500	0.00631	1	01/30/2021 07:46	WG1613622
Vinyl chloride	U		0.00146	0.00250	0.00315	1	01/30/2021 07:46	WG1613622
Xylenes, Total	0.00464	J	0.00111	0.00650	0.00820	1	01/30/2021 07:46	WG1613622
(S) Toluene-d8	*103*				*75.0-131*		*01/30/2021 07:46*	WG1613622
(S) 4-Bromofluorobenzene	*96.8*				*67.0-138*		*01/30/2021 07:46*	WG1613622
(S) 1,2-Dichloroethane-d4	*92.0*				*70.0-130*		*01/30/2021 07:46*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.9	50.0	56.3	1	02/03/2021 21:11	WG1615114
TPH C12 - C28	U		16.9	50.0	56.3	1	02/03/2021 21:11	WG1615114
TPH C28 - C35	U		16.9	50.0	56.3	1	02/03/2021 21:11	WG1615114
TPH C6 - C35	U		16.9	50.0	56.3	1	02/03/2021 21:11	WG1615114
(S) o-Terphenyl	*78.0*				*70.0-130*		*02/03/2021 21:11*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.0535	J	0.0303	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Acenaphthylene	0.0849	J	0.0264	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Anthracene	0.549		0.0334	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Benzo(a)anthracene	0.376		0.0330	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Benzo(b)fluoranthene	0.701		0.0349	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Benzo(k)fluoranthene	0.213		0.0333	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Benzo(g,h,i)perylene	0.201		0.0343	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Benzo(a)pyrene	0.374		0.0348	0.0333	0.188	5	02/03/2021 01:45	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.664	1.67	9.40	5	02/03/2021 01:45	WG1614577
Benzyl alcohol	U		0.0692	0.333	1.88	5	02/03/2021 01:45	WG1614577
Bis(2-chlorethoxy)methane	U		0.0563	0.333	1.88	5	02/03/2021 01:45	WG1614577
Bis(2-chloroethyl)ether	U		0.0619	0.333	1.88	5	02/03/2021 01:45	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.0810	0.333	1.88	5	02/03/2021 01:45	WG1614577
4-Bromophenyl-phenylether	U		0.0658	0.333	1.88	5	02/03/2021 01:45	WG1614577
Carbazole	0.107	J	0.0580	0.333	1.88	5	02/03/2021 01:45	WG1614577
2-Chloronaphthalene	U		0.0329	0.0333	0.188	5	02/03/2021 01:45	WG1614577
4-Chloroaniline	U		0.0675	0.333	1.88	5	02/03/2021 01:45	WG1614577
4-Chlorophenyl-phenylether	U		0.0653	0.333	1.88	5	02/03/2021 01:45	WG1614577
Chrysene	0.314		0.0373	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Dibenz(a,h)anthracene	U		0.0519	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Dibenzofuran	U		0.0613	0.333	1.88	5	02/03/2021 01:45	WG1614577
3,3-Dichlorobenzidine	U		0.0692	0.333	1.88	5	02/03/2021 01:45	WG1614577
2,4-Dinitrotoluene	U		0.0537	0.333	1.88	5	02/03/2021 01:45	WG1614577
2,6-Dinitrotoluene	U		0.0613	0.333	1.88	5	02/03/2021 01:45	WG1614577
Fluoranthene	0.617		0.0338	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Fluorene	0.0389	J	0.0305	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Hexachlorobenzene	U		0.0664	0.333	1.88	5	02/03/2021 01:45	WG1614577
Hexachloro-1,3-butadiene	U		0.0630	0.333	1.88	5	02/03/2021 01:45	WG1614577
Hexachlorocyclopentadiene	U		0.0985	0.333	1.88	5	02/03/2021 01:45	WG1614577
Hexachloroethane	U		0.0737	0.333	1.88	5	02/03/2021 01:45	WG1614577
Indeno(1,2,3-cd)pyrene	0.214		0.0530	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Isophorone	U		0.0574	0.333	1.88	5	02/03/2021 01:45	WG1614577
2-Methylnaphthalene	0.0267	J	0.0243	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Naphthalene	0.0825	J	0.0470	0.0333	0.188	5	02/03/2021 01:45	WG1614577
2-Nitroaniline	U		0.0602	0.333	1.88	5	02/03/2021 01:45	WG1614577
3-Nitroaniline	U		0.0597	0.333	1.88	5	02/03/2021 01:45	WG1614577
4-Nitroaniline	U		0.0546	0.333	1.88	5	02/03/2021 01:45	WG1614577
Nitrobenzene	U		0.0653	0.333	1.88	5	02/03/2021 01:45	WG1614577
n-Nitrosodimethylamine	U		0.278	0.333	1.88	5	02/03/2021 01:45	WG1614577
n-Nitrosodiphenylamine	U		0.142	0.333	1.88	5	02/03/2021 01:45	WG1614577
n-Nitrosodi-n-propylamine	U		0.0625	0.333	1.88	5	02/03/2021 01:45	WG1614577
Phenanthrene	0.344		0.0372	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Benzylbutyl phthalate	0.0844	J	0.0585	0.333	1.88	5	02/03/2021 01:45	WG1614577
Bis(2-ethylhexyl)phthalate	U		0.237	0.333	1.88	5	02/03/2021 01:45	WG1614577
Di-n-butyl phthalate	U		0.0642	0.333	1.88	5	02/03/2021 01:45	WG1614577
Diethyl phthalate	U		0.0619	0.333	1.88	5	02/03/2021 01:45	WG1614577
Dimethyl phthalate	U		0.397	0.333	1.88	5	02/03/2021 01:45	WG1614577
Di-n-octyl phthalate	U		0.127	0.333	1.88	5	02/03/2021 01:45	WG1614577
Pyrene	0.736		0.0365	0.0333	0.188	5	02/03/2021 01:45	WG1614577
Pyridine	U		0.124	0.333	1.88	5	02/03/2021 01:45	WG1614577
1,2,4-Trichlorobenzene	U		0.0585	0.333	1.88	5	02/03/2021 01:45	WG1614577
4-Chloro-3-methylphenol	U		0.0608	0.333	1.88	5	02/03/2021 01:45	WG1614577
2-Chlorophenol	U		0.0619	0.333	1.88	5	02/03/2021 01:45	WG1614577
2,4-Dichlorophenol	U		0.0546	0.333	1.88	5	02/03/2021 01:45	WG1614577
2,4-Dimethylphenol	U		0.0490	0.333	1.88	5	02/03/2021 01:45	WG1614577
4,6-Dinitro-2-methylphenol	U		0.425	0.333	1.88	5	02/03/2021 01:45	WG1614577
2,4-Dinitrophenol	U		0.438	0.333	1.88	5	02/03/2021 01:45	WG1614577
2-Methylphenol	U		0.0563	0.333	1.88	5	02/03/2021 01:45	WG1614577
3&4-Methyl Phenol	U		0.0585	0.333	1.88	5	02/03/2021 01:45	WG1614577
2-Nitrophenol	U		0.0670	0.333	1.88	5	02/03/2021 01:45	WG1614577
4-Nitrophenol	U		0.0585	0.333	1.88	5	02/03/2021 01:45	WG1614577
Pentachlorophenol	U		0.0504	0.333	1.88	5	02/03/2021 01:45	WG1614577
Phenol	U		0.0754	0.333	1.88	5	02/03/2021 01:45	WG1614577
2,4,5-Trichlorophenol	U		0.0636	0.333	1.88	5	02/03/2021 01:45	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0602	0.333	1.88	5	02/03/2021 01:45	WG1614577
(S) 2-Fluorophenol	*54.3*				*12.0-120*		*02/03/2021 01:45*	WG1614577
(S) Phenol-d5	*52.0*				*10.0-120*		*02/03/2021 01:45*	WG1614577
(S) Nitrobenzene-d5	*45.5*				*10.0-122*		*02/03/2021 01:45*	WG1614577
(S) 2-Fluorobiphenyl	*49.8*				*15.0-120*		*02/03/2021 01:45*	WG1614577
(S) 2,4,6-Tribromophenol	*49.4*				*10.0-127*		*02/03/2021 01:45*	WG1614577
(S) p-Terphenyl-d14	*57.2*				*10.0-120*		*02/03/2021 01:45*	WG1614577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.5		1	02/03/2021 14:57	WG1614563

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0444		0.0197	0.0400	0.0437	1	02/03/2021 10:02	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	14.3		0.566	2.00	2.19	1	01/30/2021 19:43	WG1613802
Barium	197		0.0931	0.500	0.547	1	01/30/2021 19:43	WG1613802
Cadmium	0.873		0.0515	0.500	0.547	1	01/30/2021 19:43	WG1613802
Chromium	23.6		0.145	1.00	1.09	1	01/30/2021 19:43	WG1613802
Lead	44.5		0.227	0.500	0.547	1	01/30/2021 19:43	WG1613802
Selenium	1.85	J	0.835	2.00	2.19	1	01/30/2021 19:43	WG1613802
Silver	U		0.139	1.00	1.09	1	01/30/2021 19:43	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0457	0.0500	0.0626	1.06	01/30/2021 08:05	WG1613622
Benzene	U		0.000585	0.00100	0.00125	1.06	01/30/2021 08:05	WG1613622
Bromobenzene	U		0.00113	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
Bromochloromethane	U		0.000706	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
Bromodichloromethane	U		0.000908	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Bromoform	U		0.00146	0.0250	0.0313	1.06	01/30/2021 08:05	WG1613622
Bromomethane	U		0.00247	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
n-Butylbenzene	U		0.00657	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
sec-Butylbenzene	U		0.00361	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
tert-Butylbenzene	U		0.00244	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
Carbon disulfide	U		0.000876	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
Carbon tetrachloride	U		0.00112	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
Chlorobenzene	U		0.000263	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Chlorodibromomethane	U		0.000766	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Chloroethane	U		0.00213	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
Chloroform	U		0.00129	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Chloromethane	U		0.00545	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
2-Chlorotoluene	U		0.00108	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
4-Chlorotoluene	U		0.000563	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00488	0.0250	0.0313	1.06	01/30/2021 08:05	WG1613622
1,2-Dibromoethane	U		0.000811	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Dibromomethane	U		0.000939	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,2-Dichlorobenzene	U		0.000532	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,3-Dichlorobenzene	U		0.000751	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,4-Dichlorobenzene	U		0.000876	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
Dichlorodifluoromethane	U		0.00202	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
1,1-Dichloroethane	U		0.000615	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
1,2-Dichloroethane	U		0.000812	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
1,1-Dichloroethene	U		0.000759	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
cis-1,2-Dichloroethene	U		0.000919	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00130	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,2-Dichloropropane	U		0.00178	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,1-Dichloropropene	U		0.00101	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000627	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
cis-1,3-Dichloropropene	U		0.000948	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
trans-1,3-Dichloropropene	U		0.00143	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
2,2-Dichloropropane	U		0.00173	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Ethylbenzene	U		0.000923	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Hexachloro-1,3-butadiene	U		0.00751	0.0250	0.0313	1.06	01/30/2021 08:05	WG1613622
2-Hexanone	U		0.00421	0.0250	0.0313	1.06	01/30/2021 08:05	WG1613622
Isopropylbenzene	0.000626	J	0.000532	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
p-Isopropyltoluene	U		0.00319	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
2-Butanone (MEK)	U		0.0795	0.100	0.125	1.06	01/30/2021 08:05	WG1613622
Methylene Chloride	U		0.00831	0.0250	0.0313	1.06	01/30/2021 08:05	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00285	0.0250	0.0313	1.06	01/30/2021 08:05	WG1613622
Methyl tert-butyl ether	U		0.000438	0.00100	0.00125	1.06	01/30/2021 08:05	WG1613622
Naphthalene	0.00666	J	0.00611	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
n-Propylbenzene	U		0.00119	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
Styrene	0.00100	J	0.000287	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00119	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
1,1,2,2-Tetrachloroethane	U		0.000870	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Tetrachloroethene	U		0.00112	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Toluene	U		0.00163	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,2,3-Trichlorobenzene	U		0.00918	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
1,2,4-Trichlorobenzene	U		0.00551	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
1,1,1-Trichloroethane	U	J4	0.00116	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
1,1,2-Trichloroethane	U		0.000747	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Trichloroethene	U	J4	0.000731	0.00100	0.00125	1.06	01/30/2021 08:05	WG1613622
Trichlorofluoromethane	U		0.00104	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
1,2,3-Trichloropropane	U		0.00203	0.0125	0.0157	1.06	01/30/2021 08:05	WG1613622
1,2,4-Trimethylbenzene	U		0.00198	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
1,3,5-Trimethylbenzene	U		0.00250	0.00500	0.00626	1.06	01/30/2021 08:05	WG1613622
Vinyl chloride	U		0.00145	0.00250	0.00313	1.06	01/30/2021 08:05	WG1613622
Xylenes, Total	0.00159	J	0.00110	0.00650	0.00814	1.06	01/30/2021 08:05	WG1613622
(S) Toluene-d8	*99.4*				*75.0-131*		*01/30/2021 08:05*	WG1613622
(S) 4-Bromofluorobenzene	*107*				*67.0-138*		*01/30/2021 08:05*	WG1613622
(S) 1,2-Dichloroethane-d4	*87.1*				*70.0-130*		*01/30/2021 08:05*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.4	50.0	54.7	1	02/03/2021 18:52	WG1615114
TPH C12 - C28	U		16.4	50.0	54.7	1	02/03/2021 18:52	WG1615114
TPH C28 - C35	U		16.4	50.0	54.7	1	02/03/2021 18:52	WG1615114
TPH C6 - C35	U		16.4	50.0	54.7	1	02/03/2021 18:52	WG1615114
(S) o-Terphenyl	*79.5*				*70.0-130*		*02/03/2021 18:52*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0589	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Acenaphthylene	0.396		0.0513	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Anthracene	0.612		0.0648	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Benzo(a)anthracene	0.385		0.0642	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Benzo(b)fluoranthene	1.68		0.0679	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Benzo(k)fluoranthene	0.483		0.0647	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Benzo(g,h,i)perylene	0.624		0.0666	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Benzo(a)pyrene	0.784		0.0677	0.0333	0.364	10	02/03/2021 02:27	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		1.29	1.67	18.3	10	02/03/2021 02:27	WG1614577
Benzyl alcohol	U		0.134	0.333	3.64	10	02/03/2021 02:27	WG1614577
Bis(2-chlorethoxy)methane	U		0.109	0.333	3.64	10	02/03/2021 02:27	WG1614577
Bis(2-chloroethyl)ether	U		0.120	0.333	3.64	10	02/03/2021 02:27	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.157	0.333	3.64	10	02/03/2021 02:27	WG1614577
4-Bromophenyl-phenylether	U		0.128	0.333	3.64	10	02/03/2021 02:27	WG1614577
Carbazole	0.230	J	0.113	0.333	3.64	10	02/03/2021 02:27	WG1614577
2-Chloronaphthalene	U		0.0640	0.0333	0.364	10	02/03/2021 02:27	WG1614577
4-Chloroaniline	U		0.131	0.333	3.64	10	02/03/2021 02:27	WG1614577
4-Chlorophenyl-phenylether	U		0.127	0.333	3.64	10	02/03/2021 02:27	WG1614577
Chrysene	0.461		0.0724	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Dibenz(a,h)anthracene	0.119	J	0.101	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Dibenzofuran	U		0.119	0.333	3.64	10	02/03/2021 02:27	WG1614577
3,3-Dichlorobenzidine	U		0.134	0.333	3.64	10	02/03/2021 02:27	WG1614577
2,4-Dinitrotoluene	U		0.104	0.333	3.64	10	02/03/2021 02:27	WG1614577
2,6-Dinitrotoluene	U		0.119	0.333	3.64	10	02/03/2021 02:27	WG1614577
Fluoranthene	0.449		0.0657	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Fluorene	U		0.0593	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Hexachlorobenzene	U		0.129	0.333	3.64	10	02/03/2021 02:27	WG1614577
Hexachloro-1,3-butadiene	U		0.122	0.333	3.64	10	02/03/2021 02:27	WG1614577
Hexachlorocyclopentadiene	U		0.191	0.333	3.64	10	02/03/2021 02:27	WG1614577
Hexachloroethane	U		0.143	0.333	3.64	10	02/03/2021 02:27	WG1614577
Indeno(1,2,3-cd)pyrene	0.529		0.103	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Isophorone	U		0.112	0.333	3.64	10	02/03/2021 02:27	WG1614577
2-Methylnaphthalene	U		0.0472	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Naphthalene	U		0.0914	0.0333	0.364	10	02/03/2021 02:27	WG1614577
2-Nitroaniline	U		0.117	0.333	3.64	10	02/03/2021 02:27	WG1614577
3-Nitroaniline	U		0.116	0.333	3.64	10	02/03/2021 02:27	WG1614577
4-Nitroaniline	U		0.106	0.333	3.64	10	02/03/2021 02:27	WG1614577
Nitrobenzene	U		0.127	0.333	3.64	10	02/03/2021 02:27	WG1614577
n-Nitrosodimethylamine	U		0.540	0.333	3.64	10	02/03/2021 02:27	WG1614577
n-Nitrosodiphenylamine	U		0.275	0.333	3.64	10	02/03/2021 02:27	WG1614577
n-Nitrosodi-n-propylamine	U		0.121	0.333	3.64	10	02/03/2021 02:27	WG1614577
Phenanthrene	U		0.0723	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Benzylbutyl phthalate	U		0.114	0.333	3.64	10	02/03/2021 02:27	WG1614577
Bis(2-ethylhexyl)phthalate	U		0.461	0.333	3.64	10	02/03/2021 02:27	WG1614577
Di-n-butyl phthalate	U		0.125	0.333	3.64	10	02/03/2021 02:27	WG1614577
Diethyl phthalate	U		0.120	0.333	3.64	10	02/03/2021 02:27	WG1614577
Dimethyl phthalate	U		0.772	0.333	3.64	10	02/03/2021 02:27	WG1614577
Di-n-octyl phthalate	U		0.246	0.333	3.64	10	02/03/2021 02:27	WG1614577
Pyrene	0.669		0.0708	0.0333	0.364	10	02/03/2021 02:27	WG1614577
Pyridine	U		0.241	0.333	3.64	10	02/03/2021 02:27	WG1614577
1,2,4-Trichlorobenzene	U		0.114	0.333	3.64	10	02/03/2021 02:27	WG1614577
4-Chloro-3-methylphenol	U		0.118	0.333	3.64	10	02/03/2021 02:27	WG1614577
2-Chlorophenol	U		0.120	0.333	3.64	10	02/03/2021 02:27	WG1614577
2,4-Dichlorophenol	U		0.106	0.333	3.64	10	02/03/2021 02:27	WG1614577
2,4-Dimethylphenol	U		0.0951	0.333	3.64	10	02/03/2021 02:27	WG1614577
4,6-Dinitro-2-methylphenol	U		0.825	0.333	3.64	10	02/03/2021 02:27	WG1614577
2,4-Dinitrophenol	U		0.852	0.333	3.64	10	02/03/2021 02:27	WG1614577
2-Methylphenol	U		0.109	0.333	3.64	10	02/03/2021 02:27	WG1614577
3&4-Methyl Phenol	U		0.114	0.333	3.64	10	02/03/2021 02:27	WG1614577
2-Nitrophenol	U		0.130	0.333	3.64	10	02/03/2021 02:27	WG1614577
4-Nitrophenol	U		0.114	0.333	3.64	10	02/03/2021 02:27	WG1614577
Pentachlorophenol	U		0.0980	0.333	3.64	10	02/03/2021 02:27	WG1614577
Phenol	U		0.146	0.333	3.64	10	02/03/2021 02:27	WG1614577
2,4,5-Trichlorophenol	U		0.124	0.333	3.64	10	02/03/2021 02:27	WG1614577

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.117	0.333	3.64	10	02/03/2021 02:27	WG1614577
(S) 2-Fluorophenol	*56.8*				*12.0-120*		*02/03/2021 02:27*	WG1614577
(S) Phenol-d5	*51.1*				*10.0-120*		*02/03/2021 02:27*	WG1614577
(S) Nitrobenzene-d5	*46.3*				*10.0-122*		*02/03/2021 02:27*	WG1614577
(S) 2-Fluorobiphenyl	*50.2*				*15.0-120*		*02/03/2021 02:27*	WG1614577
(S) 2,4,6-Tribromophenol	*46.5*				*10.0-127*		*02/03/2021 02:27*	WG1614577
(S) p-Terphenyl-d14	*52.7*				*10.0-120*		*02/03/2021 02:27*	WG1614577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	88.7		1	02/03/2021 15:44	WG1614564

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.90	T8	1	02/02/2021 00:57	WG1614203

Sample Narrative:

L1311179-17 WG1614203: 8.9 at 20.8C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0458		0.0203	0.0400	0.0451	1	02/03/2021 10:04	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	25.5		0.584	2.00	2.25	1	01/30/2021 19:08	WG1613802
Barium	296	J6	0.0960	0.500	0.563	1	01/30/2021 19:08	WG1613802
Cadmium	1.26		0.0531	0.500	0.563	1	01/30/2021 19:08	WG1613802
Chromium	73.6		0.150	1.00	1.13	1	01/30/2021 19:08	WG1613802
Lead	60.2	J5	0.234	0.500	0.563	1	01/30/2021 19:08	WG1613802
Selenium	2.66		0.861	2.00	2.25	1	01/30/2021 19:08	WG1613802
Silver	U		0.143	1.00	1.13	1	01/30/2021 19:08	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0469	0.0500	0.0642	1	01/30/2021 08:24	WG1613622
Benzene	U		0.000599	0.00100	0.00128	1	01/30/2021 08:24	WG1613622
Bromobenzene	U		0.00116	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
Bromochloromethane	U		0.000724	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
Bromodichloromethane	U		0.000931	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Bromoform	U		0.00150	0.0250	0.0321	1	01/30/2021 08:24	WG1613622
Bromomethane	U		0.00253	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
n-Butylbenzene	U		0.00674	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
sec-Butylbenzene	U		0.00370	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
tert-Butylbenzene	U		0.00250	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
Carbon disulfide	U		0.000899	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
Carbon tetrachloride	U		0.00115	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
Chlorobenzene	U		0.000270	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Chlorodibromomethane	U		0.000786	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Chloroethane	U		0.00218	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
Chloroform	U		0.00132	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Chloromethane	U		0.00558	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
2-Chlorotoluene	U		0.00111	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
4-Chlorotoluene	U		0.000578	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,2-Dibromo-3-Chloropropane	U		0.00501	0.0250	0.0321	1	01/30/2021 08:24	WG1613622
1,2-Dibromoethane	U		0.000832	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Dibromomethane	U		0.000963	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,2-Dichlorobenzene	U		0.000546	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,3-Dichlorobenzene	U		0.000770	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,4-Dichlorobenzene	U		0.000899	0.00500	0.00642	1	01/30/2021 08:24	WG1613622

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00207	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
1,1-Dichloroethane	U		0.000630	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
1,2-Dichloroethane	U		0.000833	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
1,1-Dichloroethene	U		0.000778	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
cis-1,2-Dichloroethene	U		0.000942	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
trans-1,2-Dichloroethene	U	J4	0.00133	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,2-Dichloropropane	U		0.00182	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,1-Dichloropropene	U		0.00104	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
1,3-Dichloropropane	U		0.000643	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
cis-1,3-Dichloropropene	U		0.000972	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
trans-1,3-Dichloropropene	U		0.00146	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
2,2-Dichloropropane	U		0.00177	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Ethylbenzene	U		0.000946	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Hexachloro-1,3-butadiene	U		0.00770	0.0250	0.0321	1	01/30/2021 08:24	WG1613622
2-Hexanone	U		0.00431	0.0250	0.0321	1	01/30/2021 08:24	WG1613622
Isopropylbenzene	0.000573	J	0.000546	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
p-Isopropyltoluene	U		0.00327	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
2-Butanone (MEK)	U		0.0815	0.100	0.128	1	01/30/2021 08:24	WG1613622
Methylene Chloride	U		0.00852	0.0250	0.0321	1	01/30/2021 08:24	WG1613622
4-Methyl-2-pentanone (MIBK)	U		0.00293	0.0250	0.0321	1	01/30/2021 08:24	WG1613622
Methyl tert-butyl ether	U		0.000449	0.00100	0.00128	1	01/30/2021 08:24	WG1613622
Naphthalene	U		0.00626	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
n-Propylbenzene	U		0.00122	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
Styrene	0.000365	J	0.000294	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
1,1,1,2-Tetrachloroethane	U		0.00122	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
1,1,2,2-Tetrachloroethane	U		0.000892	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Tetrachloroethene	U		0.00115	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Toluene	U		0.00167	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,2,3-Trichlorobenzene	U		0.00941	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
1,2,4-Trichlorobenzene	U		0.00565	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
1,1,1-Trichloroethane	U	J4	0.00118	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
1,1,2-Trichloroethane	U		0.000766	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Trichloroethene	U	J4	0.000750	0.00100	0.00128	1	01/30/2021 08:24	WG1613622
Trichlorofluoromethane	U		0.00106	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
1,2,3-Trichloropropane	U		0.00208	0.0125	0.0160	1	01/30/2021 08:24	WG1613622
1,2,4-Trimethylbenzene	0.00266	B J	0.00203	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
1,3,5-Trimethylbenzene	U		0.00257	0.00500	0.00642	1	01/30/2021 08:24	WG1613622
Vinyl chloride	U		0.00149	0.00250	0.00321	1	01/30/2021 08:24	WG1613622
Xylenes, Total	0.00338	J	0.00113	0.00650	0.00834	1	01/30/2021 08:24	WG1613622
(S) Toluene-d8	*104*				*75.0-131*		*01/30/2021 08:24*	WG1613622
(S) 4-Bromofluorobenzene	*97.7*				*67.0-138*		*01/30/2021 08:24*	WG1613622
(S) 1,2-Dichloroethane-d4	*91.1*				*70.0-130*		*01/30/2021 08:24*	WG1613622

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.9	50.0	56.3	1	02/03/2021 21:42	WG1615114
TPH C12 - C28	36.9	J	16.9	50.0	56.3	1	02/03/2021 21:42	WG1615114
TPH C28 - C35	65.7		16.9	50.0	56.3	1	02/03/2021 21:42	WG1615114
TPH C6 - C35	103		16.9	50.0	56.3	1	02/03/2021 21:42	WG1615114
(S) o-Terphenyl	*78.8*				*70.0-130*		*02/03/2021 21:42*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0607	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Acenaphthylene	0.313	J	0.0529	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Anthracene	1.14		0.0668	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Benzo(a)anthracene	0.628		0.0662	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Benzo(b)fluoranthene	1.36		0.0700	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Benzo(k)fluoranthene	0.427		0.0667	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Benzo(g,h,i)perylene	1.58		0.0686	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Benzo(a)pyrene	0.701		0.0698	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Benzoic acid	U		1.33	1.67	18.8	10	02/03/2021 02:48	WG1614577
Benzyl alcohol	U		0.139	0.333	3.75	10	02/03/2021 02:48	WG1614577
Bis(2-chlorethoxy)methane	U		0.113	0.333	3.75	10	02/03/2021 02:48	WG1614577
Bis(2-chloroethyl)ether	U		0.124	0.333	3.75	10	02/03/2021 02:48	WG1614577
2,2-Oxybis(1-Chloropropane)	U		0.162	0.333	3.75	10	02/03/2021 02:48	WG1614577
4-Bromophenyl-phenylether	U		0.132	0.333	3.75	10	02/03/2021 02:48	WG1614577
Carbazole	0.188	J	0.116	0.333	3.75	10	02/03/2021 02:48	WG1614577
2-Chloronaphthalene	U		0.0659	0.0333	0.375	10	02/03/2021 02:48	WG1614577
4-Chloroaniline	U		0.135	0.333	3.75	10	02/03/2021 02:48	WG1614577
4-Chlorophenyl-phenylether	U		0.131	0.333	3.75	10	02/03/2021 02:48	WG1614577
Chrysene	0.535		0.0746	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Dibenz(a,h)anthracene	0.158	J	0.104	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Dibenzofuran	U		0.123	0.333	3.75	10	02/03/2021 02:48	WG1614577
3,3-Dichlorobenzidine	U		0.139	0.333	3.75	10	02/03/2021 02:48	WG1614577
2,4-Dinitrotoluene	U		0.108	0.333	3.75	10	02/03/2021 02:48	WG1614577
2,6-Dinitrotoluene	U		0.123	0.333	3.75	10	02/03/2021 02:48	WG1614577
Fluoranthene	0.834		0.0677	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Fluorene	U		0.0611	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Hexachlorobenzene	U		0.133	0.333	3.75	10	02/03/2021 02:48	WG1614577
Hexachloro-1,3-butadiene	U		0.126	0.333	3.75	10	02/03/2021 02:48	WG1614577
Hexachlorocyclopentadiene	U		0.197	0.333	3.75	10	02/03/2021 02:48	WG1614577
Hexachloroethane	U		0.148	0.333	3.75	10	02/03/2021 02:48	WG1614577
Indeno(1,2,3-cd)pyrene	0.657		0.106	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Isophorone	U		0.115	0.333	3.75	10	02/03/2021 02:48	WG1614577
2-Methylnaphthalene	U		0.0487	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Naphthalene	U		0.0942	0.0333	0.375	10	02/03/2021 02:48	WG1614577
2-Nitroaniline	U		0.121	0.333	3.75	10	02/03/2021 02:48	WG1614577
3-Nitroaniline	U		0.119	0.333	3.75	10	02/03/2021 02:48	WG1614577
4-Nitroaniline	U		0.109	0.333	3.75	10	02/03/2021 02:48	WG1614577
Nitrobenzene	U		0.131	0.333	3.75	10	02/03/2021 02:48	WG1614577
n-Nitrosodimethylamine	U		0.557	0.333	3.75	10	02/03/2021 02:48	WG1614577
n-Nitrosodiphenylamine	U		0.284	0.333	3.75	10	02/03/2021 02:48	WG1614577
n-Nitrosodi-n-propylamine	U		0.125	0.333	3.75	10	02/03/2021 02:48	WG1614577
Phenanthrene	0.179	J	0.0745	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Benzylbutyl phthalate	U		0.117	0.333	3.75	10	02/03/2021 02:48	WG1614577
Bis(2-ethylhexyl)phthalate	U		0.476	0.333	3.75	10	02/03/2021 02:48	WG1614577
Di-n-butyl phthalate	U		0.128	0.333	3.75	10	02/03/2021 02:48	WG1614577
Diethyl phthalate	U		0.124	0.333	3.75	10	02/03/2021 02:48	WG1614577
Dimethyl phthalate	U		0.796	0.333	3.75	10	02/03/2021 02:48	WG1614577
Di-n-octyl phthalate	U		0.254	0.333	3.75	10	02/03/2021 02:48	WG1614577
Pyrene	0.894		0.0730	0.0333	0.375	10	02/03/2021 02:48	WG1614577
Pyridine	U		0.248	0.333	3.75	10	02/03/2021 02:48	WG1614577
1,2,4-Trichlorobenzene	U		0.117	0.333	3.75	10	02/03/2021 02:48	WG1614577
4-Chloro-3-methylphenol	U		0.122	0.333	3.75	10	02/03/2021 02:48	WG1614577
2-Chlorophenol	U		0.124	0.333	3.75	10	02/03/2021 02:48	WG1614577
2,4-Dichlorophenol	U		0.109	0.333	3.75	10	02/03/2021 02:48	WG1614577
2,4-Dimethylphenol	U		0.0980	0.333	3.75	10	02/03/2021 02:48	WG1614577
4,6-Dinitro-2-methylphenol	U		0.851	0.333	3.75	10	02/03/2021 02:48	WG1614577

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dinitrophenol	U		0.878	0.333	3.75	10	02/03/2021 02:48	WG1614577
2-Methylphenol	U		0.113	0.333	3.75	10	02/03/2021 02:48	WG1614577
3&4-Methyl Phenol	U		0.117	0.333	3.75	10	02/03/2021 02:48	WG1614577
2-Nitrophenol	U		0.134	0.333	3.75	10	02/03/2021 02:48	WG1614577
4-Nitrophenol	U		0.117	0.333	3.75	10	02/03/2021 02:48	WG1614577
Pentachlorophenol	U		0.101	0.333	3.75	10	02/03/2021 02:48	WG1614577
Phenol	U		0.151	0.333	3.75	10	02/03/2021 02:48	WG1614577
2,4,5-Trichlorophenol	U		0.127	0.333	3.75	10	02/03/2021 02:48	WG1614577
2,4,6-Trichlorophenol	U		0.121	0.333	3.75	10	02/03/2021 02:48	WG1614577
(S) 2-Fluorophenol	*68.3*				*12.0-120*		*02/03/2021 02:48*	WG1614577
(S) Phenol-d5	*61.2*				*10.0-120*		*02/03/2021 02:48*	WG1614577
(S) Nitrobenzene-d5	*50.2*				*10.0-122*		*02/03/2021 02:48*	WG1614577
(S) 2-Fluorobiphenyl	*60.6*				*15.0-120*		*02/03/2021 02:48*	WG1614577
(S) 2,4,6-Tribromophenol	*55.5*				*10.0-127*		*02/03/2021 02:48*	WG1614577
(S) p-Terphenyl-d14	*63.6*				*10.0-120*		*02/03/2021 02:48*	WG1614577

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.9		1	02/03/2021 15:44	WG1614564

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0334	J	0.0192	0.0400	0.0426	1	02/03/2021 10:07	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	22.4		0.552	2.00	2.13	1	01/30/2021 19:46	WG1613802
Barium	563		0.0908	0.500	0.533	1	01/30/2021 19:46	WG1613802
Cadmium	0.869		0.0502	0.500	0.533	1	01/30/2021 19:46	WG1613802
Chromium	20.8		0.142	1.00	1.07	1	01/30/2021 19:46	WG1613802
Lead	80.2		0.222	0.500	0.533	1	01/30/2021 19:46	WG1613802
Selenium	1.88	J	0.814	2.00	2.13	1	01/30/2021 19:46	WG1613802
Silver	U		0.135	1.00	1.07	1	01/30/2021 19:46	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U	J4	0.0420	0.0500	0.0576	1	01/30/2021 17:37	WG1613623
Benzene	U		0.000538	0.00100	0.00115	1	01/30/2021 17:37	WG1613623
Bromobenzene	U		0.00104	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
Bromochloromethane	U	J4	0.000650	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
Bromodichloromethane	U		0.000835	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Bromoform	U		0.00135	0.0250	0.0288	1	01/30/2021 17:37	WG1613623
Bromomethane	U		0.00227	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
n-Butylbenzene	U		0.00605	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
sec-Butylbenzene	U		0.00332	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
tert-Butylbenzene	U		0.00225	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
Carbon disulfide	U		0.000806	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
Carbon tetrachloride	U		0.00103	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
Chlorobenzene	U		0.000242	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Chlorodibromomethane	U		0.000705	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Chloroethane	U		0.00196	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
Chloroform	U		0.00119	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Chloromethane	U		0.00501	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
2-Chlorotoluene	U		0.000996	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
4-Chlorotoluene	U		0.000518	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,2-Dibromo-3-Chloropropane	U		0.00449	0.0250	0.0288	1	01/30/2021 17:37	WG1613623
1,2-Dibromoethane	U		0.000746	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Dibromomethane	U		0.000864	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,2-Dichlorobenzene	U		0.000489	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,3-Dichlorobenzene	U		0.000691	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,4-Dichlorobenzene	U		0.000806	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
Dichlorodifluoromethane	U		0.00185	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
1,1-Dichloroethane	U		0.000565	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
1,2-Dichloroethane	U		0.000747	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
1,1-Dichloroethene	U		0.000698	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
cis-1,2-Dichloroethene	U		0.000845	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
trans-1,2-Dichloroethene	U		0.00120	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,2-Dichloropropane	U		0.00164	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,1-Dichloropropene	U		0.000932	0.00250	0.00288	1	01/30/2021 17:37	WG1613623

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000577	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
cis-1,3-Dichloropropene	U		0.000872	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
trans-1,3-Dichloropropene	U		0.00131	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
2,2-Dichloropropane	U		0.00159	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Ethylbenzene	U		0.000849	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Hexachloro-1,3-butadiene	U		0.00691	0.0250	0.0288	1	01/30/2021 17:37	WG1613623
2-Hexanone	U		0.00387	0.0250	0.0288	1	01/30/2021 17:37	WG1613623
Isopropylbenzene	U		0.000489	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
p-Isopropyltoluene	U		0.00294	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
2-Butanone (MEK)	U		0.0731	0.100	0.115	1	01/30/2021 17:37	WG1613623
Methylene Chloride	U		0.00765	0.0250	0.0288	1	01/30/2021 17:37	WG1613623
4-Methyl-2-pentanone (MIBK)	U		0.00263	0.0250	0.0288	1	01/30/2021 17:37	WG1613623
Methyl tert-butyl ether	U		0.000403	0.00100	0.00115	1	01/30/2021 17:37	WG1613623
Naphthalene	U		0.00562	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
n-Propylbenzene	U		0.00109	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
Styrene	0.000302	J	0.000264	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
1,1,1,2-Tetrachloroethane	U		0.00109	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
1,1,2,2-Tetrachloroethane	U		0.000800	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Tetrachloroethene	U		0.00103	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Toluene	U		0.00150	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,2,3-Trichlorobenzene	U		0.00844	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
1,2,4-Trichlorobenzene	U		0.00507	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
1,1,1-Trichloroethane	U		0.00106	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
1,1,2-Trichloroethane	U		0.000688	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Trichloroethene	U		0.000673	0.00100	0.00115	1	01/30/2021 17:37	WG1613623
Trichlorofluoromethane	U		0.000952	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
1,2,3-Trichloropropane	U		0.00187	0.0125	0.0144	1	01/30/2021 17:37	WG1613623
1,2,4-Trimethylbenzene	U		0.00182	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
1,3,5-Trimethylbenzene	U		0.00230	0.00500	0.00576	1	01/30/2021 17:37	WG1613623
Vinyl chloride	U		0.00134	0.00250	0.00288	1	01/30/2021 17:37	WG1613623
Xylenes, Total	0.00217	J	0.00101	0.00650	0.00749	1	01/30/2021 17:37	WG1613623
(S) Toluene-d8	*97.9*				*75.0-131*		*01/30/2021 17:37*	WG1613623
(S) 4-Bromofluorobenzene	*98.1*				*67.0-138*		*01/30/2021 17:37*	WG1613623
(S) 1,2-Dichloroethane-d4	*86.5*				*70.0-130*		*01/30/2021 17:37*	WG1613623

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.0	50.0	53.3	1	02/03/2021 19:07	WG1615114
TPH C12 - C28	U		16.0	50.0	53.3	1	02/03/2021 19:07	WG1615114
TPH C28 - C35	U		16.0	50.0	53.3	1	02/03/2021 19:07	WG1615114
TPH C6 - C35	U		16.0	50.0	53.3	1	02/03/2021 19:07	WG1615114
(S) o-Terphenyl	*82.5*				*70.0-130*		*02/03/2021 19:07*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	0.0153	J	0.0115	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Acenaphthylene	0.107		0.00999	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Anthracene	0.132		0.0126	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Benzo(a)anthracene	0.235		0.0125	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Benzo(b)fluoranthene	0.616		0.0132	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Benzo(k)fluoranthene	0.156		0.0126	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Benzo(g,h,i)perylene	0.274		0.0130	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Benzo(a)pyrene	0.298		0.0132	0.0333	0.0709	2	02/05/2021 17:52	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.251	1.67	3.56	2	02/05/2021 17:52	WG1616776
Benzyl alcohol	U		0.0262	0.333	0.709	2	02/05/2021 17:52	WG1616776
Bis(2-chlorethoxy)methane	U		0.0213	0.333	0.709	2	02/05/2021 17:52	WG1616776
Bis(2-chloroethyl)ether	U		0.0234	0.333	0.709	2	02/05/2021 17:52	WG1616776
2,2-Oxybis(1-Chloropropane)	U		0.0307	0.333	0.709	2	02/05/2021 17:52	WG1616776
4-Bromophenyl-phenylether	U		0.0249	0.333	0.709	2	02/05/2021 17:52	WG1616776
Carbazole	0.0764	J	0.0219	0.333	0.709	2	02/05/2021 17:52	WG1616776
2-Chloronaphthalene	U		0.0125	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
4-Chloroaniline	U		0.0256	0.333	0.709	2	02/05/2021 17:52	WG1616776
4-Chlorophenyl-phenylether	U		0.0247	0.333	0.709	2	02/05/2021 17:52	WG1616776
Chrysene	0.317		0.0141	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Dibenz(a,h)anthracene	0.0416	J	0.0197	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Dibenzofuran	U		0.0232	0.333	0.709	2	02/05/2021 17:52	WG1616776
3,3-Dichlorobenzidine	U		0.0262	0.333	0.709	2	02/05/2021 17:52	WG1616776
2,4-Dinitrotoluene	U		0.0203	0.333	0.709	2	02/05/2021 17:52	WG1616776
2,6-Dinitrotoluene	U		0.0232	0.333	0.709	2	02/05/2021 17:52	WG1616776
Fluoranthene	0.410		0.0128	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Fluorene	U		0.0115	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Hexachlorobenzene	U		0.0251	0.333	0.709	2	02/05/2021 17:52	WG1616776
Hexachloro-1,3-butadiene	U		0.0239	0.333	0.709	2	02/05/2021 17:52	WG1616776
Hexachlorocyclopentadiene	U		0.0373	0.333	0.709	2	02/05/2021 17:52	WG1616776
Hexachloroethane	U		0.0279	0.333	0.709	2	02/05/2021 17:52	WG1616776
Indeno(1,2,3-cd)pyrene	0.196		0.0200	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Isophorone	U		0.0217	0.333	0.709	2	02/05/2021 17:52	WG1616776
2-Methylnaphthalene	0.0115	J	0.00920	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Naphthalene	U		0.0178	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
2-Nitroaniline	U		0.0228	0.333	0.709	2	02/05/2021 17:52	WG1616776
3-Nitroaniline	U		0.0226	0.333	0.709	2	02/05/2021 17:52	WG1616776
4-Nitroaniline	U		0.0207	0.333	0.709	2	02/05/2021 17:52	WG1616776
Nitrobenzene	U		0.0247	0.333	0.709	2	02/05/2021 17:52	WG1616776
n-Nitrosodimethylamine	U		0.105	0.333	0.709	2	02/05/2021 17:52	WG1616776
n-Nitrosodiphenylamine	U		0.0537	0.333	0.709	2	02/05/2021 17:52	WG1616776
n-Nitrosodi-n-propylamine	U		0.0236	0.333	0.709	2	02/05/2021 17:52	WG1616776
Phenanthrene	0.171		0.0141	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Benzylbutyl phthalate	U		0.0222	0.333	0.709	2	02/05/2021 17:52	WG1616776
Bis(2-ethylhexyl)phthalate	U		0.0899	0.333	0.709	2	02/05/2021 17:52	WG1616776
Di-n-butyl phthalate	U		0.0243	0.333	0.709	2	02/05/2021 17:52	WG1616776
Diethyl phthalate	U		0.0234	0.333	0.709	2	02/05/2021 17:52	WG1616776
Dimethyl phthalate	U		0.150	0.333	0.709	2	02/05/2021 17:52	WG1616776
Di-n-octyl phthalate	U		0.0479	0.333	0.709	2	02/05/2021 17:52	WG1616776
Pyrene	0.509		0.0138	0.0333	0.0709	2	02/05/2021 17:52	WG1616776
Pyridine	U		0.0469	0.333	0.709	2	02/05/2021 17:52	WG1616776
1,2,4-Trichlorobenzene	U		0.0222	0.333	0.709	2	02/05/2021 17:52	WG1616776
4-Chloro-3-methylphenol	U		0.0230	0.333	0.709	2	02/05/2021 17:52	WG1616776
2-Chlorophenol	U		0.0234	0.333	0.709	2	02/05/2021 17:52	WG1616776
2,4-Dichlorophenol	U		0.0207	0.333	0.709	2	02/05/2021 17:52	WG1616776
2,4-Dimethylphenol	U		0.0185	0.333	0.709	2	02/05/2021 17:52	WG1616776
4,6-Dinitro-2-methylphenol	U		0.161	0.333	0.709	2	02/05/2021 17:52	WG1616776
2,4-Dinitrophenol	U		0.166	0.333	0.709	2	02/05/2021 17:52	WG1616776
2-Methylphenol	U		0.0213	0.333	0.709	2	02/05/2021 17:52	WG1616776
3&4-Methyl Phenol	U		0.0222	0.333	0.709	2	02/05/2021 17:52	WG1616776
2-Nitrophenol	U		0.0254	0.333	0.709	2	02/05/2021 17:52	WG1616776
4-Nitrophenol	U		0.0222	0.333	0.709	2	02/05/2021 17:52	WG1616776
Pentachlorophenol	U		0.0191	0.333	0.709	2	02/05/2021 17:52	WG1616776
Phenol	U		0.0285	0.333	0.709	2	02/05/2021 17:52	WG1616776
2,4,5-Trichlorophenol	U		0.0241	0.333	0.709	2	02/05/2021 17:52	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0228	0.333	0.709	2	02/05/2021 17:52	WG1616776
(S) 2-Fluorophenol	*84.4*				*12.0-120*		*02/05/2021 17:52*	WG1616776
(S) Phenol-d5	*76.4*				*10.0-120*		*02/05/2021 17:52*	WG1616776
(S) Nitrobenzene-d5	*74.3*				*10.0-122*		*02/05/2021 17:52*	WG1616776
(S) 2-Fluorobiphenyl	*82.0*				*15.0-120*		*02/05/2021 17:52*	WG1616776
(S) 2,4,6-Tribromophenol	*82.2*				*10.0-127*		*02/05/2021 17:52*	WG1616776
(S) p-Terphenyl-d14	*97.5*				*10.0-120*		*02/05/2021 17:52*	WG1616776

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.8		1	02/03/2021 15:44	WG1614564

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.135		0.0198	0.0400	0.0441	1	02/03/2021 10:09	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	47.1		0.571	2.00	2.20	1	01/30/2021 19:49	WG1613802
Barium	514		0.0939	0.500	0.551	1	01/30/2021 19:49	WG1613802
Cadmium	2.24		0.0519	0.500	0.551	1	01/30/2021 19:49	WG1613802
Chromium	31.8		0.147	1.00	1.10	1	01/30/2021 19:49	WG1613802
Lead	112		0.229	0.500	0.551	1	01/30/2021 19:49	WG1613802
Selenium	2.80		0.842	2.00	2.20	1	01/30/2021 19:49	WG1613802
Silver	0.184	J	0.140	1.00	1.10	1	01/30/2021 19:49	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0457	0.0500	0.0626	1	02/03/2021 20:08	WG1615753
Benzene	U		0.000585	0.00100	0.00125	1	01/30/2021 17:56	WG1613623
Bromobenzene	U		0.00113	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
Bromochloromethane	U	J4	0.000707	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
Bromodichloromethane	U		0.000908	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Bromoform	U		0.00147	0.0250	0.0313	1	01/30/2021 17:56	WG1613623
Bromomethane	U		0.00247	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
n-Butylbenzene	U		0.00658	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
sec-Butylbenzene	U		0.00361	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
tert-Butylbenzene	U		0.00244	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
Carbon disulfide	U		0.000877	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
Carbon tetrachloride	U		0.00112	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
Chlorobenzene	U		0.000263	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Chlorodibromomethane	U		0.000767	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Chloroethane	U		0.00213	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
Chloroform	U		0.00129	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Chloromethane	U		0.00545	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
2-Chlorotoluene	U		0.00108	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
4-Chlorotoluene	U		0.000564	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,2-Dibromo-3-Chloropropane	U		0.00489	0.0250	0.0313	1	01/30/2021 17:56	WG1613623
1,2-Dibromoethane	U		0.000812	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Dibromomethane	U		0.000939	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,2-Dichlorobenzene	U		0.000532	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,3-Dichlorobenzene	U		0.000752	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,4-Dichlorobenzene	U		0.000877	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
Dichlorodifluoromethane	U		0.00202	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
1,1-Dichloroethane	U		0.000615	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
1,2-Dichloroethane	U		0.000813	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
1,1-Dichloroethene	U		0.000759	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
cis-1,2-Dichloroethene	U		0.000919	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
trans-1,2-Dichloroethene	U		0.00130	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,2-Dichloropropane	U		0.00178	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,1-Dichloropropene	U		0.00101	0.00250	0.00313	1	01/30/2021 17:56	WG1613623

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000628	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
cis-1,3-Dichloropropene	U		0.000948	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
trans-1,3-Dichloropropene	U		0.00143	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
2,2-Dichloropropane	U		0.00173	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Ethylbenzene	U		0.000923	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Hexachloro-1,3-butadiene	U		0.00752	0.0250	0.0313	1	01/30/2021 17:56	WG1613623
2-Hexanone	U		0.00421	0.0250	0.0313	1	01/30/2021 17:56	WG1613623
Isopropylbenzene	0.000630	J	0.000532	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
p-Isopropyltoluene	U		0.00319	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
2-Butanone (MEK)	U		0.0795	0.100	0.125	1	01/30/2021 17:56	WG1613623
Methylene Chloride	U		0.00832	0.0250	0.0313	1	01/30/2021 17:56	WG1613623
4-Methyl-2-pentanone (MIBK)	U		0.00286	0.0250	0.0313	1	01/30/2021 17:56	WG1613623
Methyl tert-butyl ether	U		0.000438	0.00100	0.00125	1	01/30/2021 17:56	WG1613623
Naphthalene	0.0197		0.00611	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
n-Propylbenzene	U		0.00119	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
Styrene	0.00137	J	0.000287	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
1,1,1,2-Tetrachloroethane	U		0.00119	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
1,1,2,2-Tetrachloroethane	U		0.000871	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Tetrachloroethene	U		0.00112	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Toluene	U		0.00163	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,2,3-Trichlorobenzene	U		0.00918	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
1,2,4-Trichlorobenzene	U		0.00551	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
1,1,1-Trichloroethane	U		0.00116	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
1,1,2-Trichloroethane	U		0.000748	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Trichloroethene	U		0.000732	0.00100	0.00125	1	01/30/2021 17:56	WG1613623
Trichlorofluoromethane	U		0.00104	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
1,2,3-Trichloropropane	U		0.00203	0.0125	0.0157	1	01/30/2021 17:56	WG1613623
1,2,4-Trimethylbenzene	U		0.00198	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
1,3,5-Trimethylbenzene	U		0.00251	0.00500	0.00626	1	01/30/2021 17:56	WG1613623
Vinyl chloride	U		0.00145	0.00250	0.00313	1	01/30/2021 17:56	WG1613623
Xylenes, Total	0.00346	J	0.00110	0.00650	0.00814	1	01/30/2021 17:56	WG1613623
(S) Toluene-d8	*99.3*				*75.0-131*		*01/30/2021 17:56*	WG1613623
(S) Toluene-d8	*107*				*75.0-131*		*02/03/2021 20:08*	WG1615753
(S) 4-Bromofluorobenzene	*100*				*67.0-138*		*01/30/2021 17:56*	WG1613623
(S) 4-Bromofluorobenzene	*95.7*				*67.0-138*		*02/03/2021 20:08*	WG1615753
(S) 1,2-Dichloroethane-d4	*89.8*				*70.0-130*		*01/30/2021 17:56*	WG1613623
(S) 1,2-Dichloroethane-d4	*75.1*				*70.0-130*		*02/03/2021 20:08*	WG1615753

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.5	50.0	55.1	1	02/03/2021 21:58	WG1615114
TPH C12 - C28	67.7		16.5	50.0	55.1	1	02/03/2021 21:58	WG1615114
TPH C28 - C35	88.3		16.5	50.0	55.1	1	02/03/2021 21:58	WG1615114
TPH C6 - C35	156		16.5	50.0	55.1	1	02/03/2021 21:58	WG1615114
(S) o-Terphenyl	*78.8*				*70.0-130*		*02/03/2021 21:58*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.237	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Acenaphthylene	0.769	J	0.207	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Anthracene	1.26	J	0.261	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Benzo(a)anthracene	0.865	J	0.259	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Benzo(b)fluoranthene	5.60		0.274	0.0333	1.47	40	02/05/2021 20:24	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(k)fluoranthene	1.26	J	0.261	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Benzo(g,h,i)perylene	1.60		0.268	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Benzo(a)pyrene	2.52		0.273	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Benzoic acid	U		5.20	1.67	73.6	40	02/05/2021 20:24	WG1616776
Benzyl alcohol	U		0.542	0.333	14.7	40	02/05/2021 20:24	WG1616776
Bis(2-chlorethoxy)methane	U		0.441	0.333	14.7	40	02/05/2021 20:24	WG1616776
Bis(2-chloroethyl)ether	U		0.485	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,2-Oxybis(1-Chloropropane)	U		0.634	0.333	14.7	40	02/05/2021 20:24	WG1616776
4-Bromophenyl-phenylether	U		0.516	0.333	14.7	40	02/05/2021 20:24	WG1616776
Carbazole	0.757	J	0.454	0.333	14.7	40	02/05/2021 20:24	WG1616776
2-Chloronaphthalene	U		0.258	0.0333	1.47	40	02/05/2021 20:24	WG1616776
4-Chloroaniline	U		0.529	0.333	14.7	40	02/05/2021 20:24	WG1616776
4-Chlorophenyl-phenylether	U		0.511	0.333	14.7	40	02/05/2021 20:24	WG1616776
Chrysene	0.756	J	0.292	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Dibenz(a,h)anthracene	U		0.407	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Dibenzofuran	U		0.480	0.333	14.7	40	02/05/2021 20:24	WG1616776
3,3-Dichlorobenzidine	U		0.542	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,4-Dinitrotoluene	U		0.421	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,6-Dinitrotoluene	U		0.480	0.333	14.7	40	02/05/2021 20:24	WG1616776
Fluoranthene	1.10	J	0.265	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Fluorene	U		0.239	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Hexachlorobenzene	U		0.520	0.333	14.7	40	02/05/2021 20:24	WG1616776
Hexachloro-1,3-butadiene	U		0.493	0.333	14.7	40	02/05/2021 20:24	WG1616776
Hexachlorocyclopentadiene	U		0.771	0.333	14.7	40	02/05/2021 20:24	WG1616776
Hexachloroethane	U		0.577	0.333	14.7	40	02/05/2021 20:24	WG1616776
Indeno(1,2,3-cd)pyrene	1.24	J	0.415	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Isophorone	U		0.449	0.333	14.7	40	02/05/2021 20:24	WG1616776
2-Methylnaphthalene	U		0.190	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Naphthalene	U		0.368	0.0333	1.47	40	02/05/2021 20:24	WG1616776
2-Nitroaniline	U		0.471	0.333	14.7	40	02/05/2021 20:24	WG1616776
3-Nitroaniline	U		0.467	0.333	14.7	40	02/05/2021 20:24	WG1616776
4-Nitroaniline	U		0.428	0.333	14.7	40	02/05/2021 20:24	WG1616776
Nitrobenzene	U		0.511	0.333	14.7	40	02/05/2021 20:24	WG1616776
n-Nitrosodimethylamine	U		2.18	0.333	14.7	40	02/05/2021 20:24	WG1616776
n-Nitrosodiphenylamine	U		1.11	0.333	14.7	40	02/05/2021 20:24	WG1616776
n-Nitrosodi-n-propylamine	U		0.489	0.333	14.7	40	02/05/2021 20:24	WG1616776
Phenanthrene	U		0.291	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Benzylbutyl phthalate	U		0.458	0.333	14.7	40	02/05/2021 20:24	WG1616776
Bis(2-ethylhexyl)phthalate	U		1.86	0.333	14.7	40	02/05/2021 20:24	WG1616776
Di-n-butyl phthalate	U		0.502	0.333	14.7	40	02/05/2021 20:24	WG1616776
Diethyl phthalate	U		0.485	0.333	14.7	40	02/05/2021 20:24	WG1616776
Dimethyl phthalate	U		3.11	0.333	14.7	40	02/05/2021 20:24	WG1616776
Di-n-octyl phthalate	U		0.991	0.333	14.7	40	02/05/2021 20:24	WG1616776
Pyrene	1.54		0.286	0.0333	1.47	40	02/05/2021 20:24	WG1616776
Pyridine	U		0.969	0.333	14.7	40	02/05/2021 20:24	WG1616776
1,2,4-Trichlorobenzene	U		0.458	0.333	14.7	40	02/05/2021 20:24	WG1616776
4-Chloro-3-methylphenol	U		0.476	0.333	14.7	40	02/05/2021 20:24	WG1616776
2-Chlorophenol	U		0.485	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,4-Dichlorophenol	U		0.427	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,4-Dimethylphenol	U		0.383	0.333	14.7	40	02/05/2021 20:24	WG1616776
4,6-Dinitro-2-methylphenol	U		3.33	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,4-Dinitrophenol	U		3.43	0.333	14.7	40	02/05/2021 20:24	WG1616776
2-Methylphenol	U		0.441	0.333	14.7	40	02/05/2021 20:24	WG1616776
3&4-Methyl Phenol	U		0.458	0.333	14.7	40	02/05/2021 20:24	WG1616776
2-Nitrophenol	U		0.524	0.333	14.7	40	02/05/2021 20:24	WG1616776
4-Nitrophenol	U		0.458	0.333	14.7	40	02/05/2021 20:24	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pentachlorophenol	U		0.395	0.333	14.7	40	02/05/2021 20:24	WG1616776
Phenol	U		0.590	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,4,5-Trichlorophenol	U		0.498	0.333	14.7	40	02/05/2021 20:24	WG1616776
2,4,6-Trichlorophenol	U		0.471	0.333	14.7	40	02/05/2021 20:24	WG1616776
(S) 2-Fluorophenol	*79.8*	J7			*12.0-120*		*02/05/2021 20:24*	WG1616776
(S) Phenol-d5	*78.6*	J7			*10.0-120*		*02/05/2021 20:24*	WG1616776
(S) Nitrobenzene-d5	*77.2*	J7			*10.0-122*		*02/05/2021 20:24*	WG1616776
(S) 2-Fluorobiphenyl	*79.4*	J7			*15.0-120*		*02/05/2021 20:24*	WG1616776
(S) 2,4,6-Tribromophenol	*71.0*	J7			*10.0-127*		*02/05/2021 20:24*	WG1616776
(S) p-Terphenyl-d14	*87.8*	J7			*10.0-120*		*02/05/2021 20:24*	WG1616776

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	02/03/2021 15:44	WG1614564

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.103		0.0194	0.0400	0.0430	1	02/03/2021 10:12	WG1614236

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	37.1		0.557	2.00	2.15	1	01/30/2021 19:52	WG1613802
Barium	551		0.0916	0.500	0.538	1	01/30/2021 19:52	WG1613802
Cadmium	1.25		0.0506	0.500	0.538	1	01/30/2021 19:52	WG1613802
Chromium	32.9		0.143	1.00	1.08	1	01/30/2021 19:52	WG1613802
Lead	116		0.224	0.500	0.538	1	01/30/2021 19:52	WG1613802
Selenium	2.56		0.822	2.00	2.15	1	01/30/2021 19:52	WG1613802
Silver	U		0.137	1.00	1.08	1	01/30/2021 19:52	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U		0.0431	0.0500	0.0590	1	02/03/2021 20:27	WG1615753
Benzene	U		0.000551	0.00100	0.00118	1	01/30/2021 18:14	WG1613623
Bromobenzene	U		0.00106	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
Bromochloromethane	U	J4	0.000666	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
Bromodichloromethane	U		0.000856	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Bromoform	U		0.00138	0.0250	0.0295	1	01/30/2021 18:14	WG1613623
Bromomethane	U		0.00233	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
n-Butylbenzene	U		0.00620	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
sec-Butylbenzene	U		0.00340	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
tert-Butylbenzene	U		0.00230	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
Carbon disulfide	U		0.000827	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
Carbon tetrachloride	U		0.00106	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
Chlorobenzene	U		0.000248	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Chlorodibromomethane	U		0.000723	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Chloroethane	U		0.00201	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
Chloroform	U		0.00122	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Chloromethane	U		0.00514	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
2-Chlorotoluene	U		0.00102	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
4-Chlorotoluene	U		0.000531	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,2-Dibromo-3-Chloropropane	U		0.00461	0.0250	0.0295	1	01/30/2021 18:14	WG1613623
1,2-Dibromoethane	U		0.000765	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Dibromomethane	U		0.000886	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,2-Dichlorobenzene	U		0.000502	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,3-Dichlorobenzene	U		0.000709	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,4-Dichlorobenzene	U		0.000827	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
Dichlorodifluoromethane	U		0.00190	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
1,1-Dichloroethane	U		0.000580	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
1,2-Dichloroethane	U		0.000766	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
1,1-Dichloroethene	U		0.000716	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
cis-1,2-Dichloroethene	U		0.000867	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
trans-1,2-Dichloroethene	U		0.00123	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,2-Dichloropropane	U		0.00168	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,1-Dichloropropene	U		0.000955	0.00250	0.00295	1	01/30/2021 18:14	WG1613623

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000592	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
cis-1,3-Dichloropropene	U		0.000894	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
trans-1,3-Dichloropropene	U		0.00135	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
2,2-Dichloropropane	U		0.00163	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Ethylbenzene	0.00294	J	0.000870	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Hexachloro-1,3-butadiene	U		0.00709	0.0250	0.0295	1	01/30/2021 18:14	WG1613623
2-Hexanone	U		0.00397	0.0250	0.0295	1	01/30/2021 18:14	WG1613623
Isopropylbenzene	U		0.000502	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
p-Isopropyltoluene	U		0.00301	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
2-Butanone (MEK)	U		0.0750	0.100	0.118	1	01/30/2021 18:14	WG1613623
Methylene Chloride	0.00824	J	0.00784	0.0250	0.0295	1	01/30/2021 18:14	WG1613623
4-Methyl-2-pentanone (MIBK)	U		0.00269	0.0250	0.0295	1	01/30/2021 18:14	WG1613623
Methyl tert-butyl ether	U		0.000413	0.00100	0.00118	1	01/30/2021 18:14	WG1613623
Naphthalene	0.00962	J	0.00576	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
n-Propylbenzene	U		0.00112	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
Styrene	U		0.000270	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
1,1,1,2-Tetrachloroethane	U		0.00112	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
1,1,2,2-Tetrachloroethane	U		0.000821	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Tetrachloroethene	U		0.00106	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Toluene	U		0.00154	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,2,3-Trichlorobenzene	U		0.00866	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
1,2,4-Trichlorobenzene	U		0.00520	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
1,1,1-Trichloroethane	U		0.00109	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
1,1,2-Trichloroethane	U		0.000705	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Trichloroethene	U		0.000690	0.00100	0.00118	1	01/30/2021 18:14	WG1613623
Trichlorofluoromethane	U		0.000977	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
1,2,3-Trichloropropane	U		0.00191	0.0125	0.0148	1	01/30/2021 18:14	WG1613623
1,2,4-Trimethylbenzene	U		0.00187	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
1,3,5-Trimethylbenzene	U		0.00236	0.00500	0.00590	1	01/30/2021 18:14	WG1613623
Vinyl chloride	U		0.00137	0.00250	0.00295	1	01/30/2021 18:14	WG1613623
Xylenes, Total	0.0162		0.00104	0.00650	0.00768	1	01/30/2021 18:14	WG1613623
(S) Toluene-d8	*98.5*				*75.0-131*		*01/30/2021 18:14*	WG1613623
(S) Toluene-d8	*107*				*75.0-131*		*02/03/2021 20:27*	WG1615753
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*01/30/2021 18:14*	WG1613623
(S) 4-Bromofluorobenzene	*99.3*				*67.0-138*		*02/03/2021 20:27*	WG1615753
(S) 1,2-Dichloroethane-d4	*93.1*				*70.0-130*		*01/30/2021 18:14*	WG1613623
(S) 1,2-Dichloroethane-d4	*80.6*				*70.0-130*		*02/03/2021 20:27*	WG1615753

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.1	50.0	53.8	1	02/03/2021 19:23	WG1615114
TPH C12 - C28	U		16.1	50.0	53.8	1	02/03/2021 19:23	WG1615114
TPH C28 - C35	U		16.1	50.0	53.8	1	02/03/2021 19:23	WG1615114
TPH C6 - C35	U		16.1	50.0	53.8	1	02/03/2021 19:23	WG1615114
(S) o-Terphenyl	*82.1*				*70.0-130*		*02/03/2021 19:23*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0116	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Acenaphthylene	0.0570	J	0.0101	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Anthracene	0.298		0.0128	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Benzo(a)anthracene	0.138		0.0126	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Benzo(b)fluoranthene	0.436		0.0134	0.0333	0.0716	2	02/05/2021 18:16	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(k)fluoranthene	0.117		0.0127	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Benzo(g,h,i)perylene	0.0899		0.0131	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Benzo(a)pyrene	0.139		0.0133	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Benzoic acid	U		0.254	1.67	3.59	2	02/05/2021 18:16	WG1616776
Benzyl alcohol	U		0.0265	0.333	0.716	2	02/05/2021 18:16	WG1616776
Bis(2-chlorethoxy)methane	U		0.0215	0.333	0.716	2	02/05/2021 18:16	WG1616776
Bis(2-chloroethyl)ether	U		0.0237	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,2-Oxybis(1-Chloropropane)	U		0.0310	0.333	0.716	2	02/05/2021 18:16	WG1616776
4-Bromophenyl-phenylether	U		0.0252	0.333	0.716	2	02/05/2021 18:16	WG1616776
Carbazole	0.0739	J	0.0222	0.333	0.716	2	02/05/2021 18:16	WG1616776
2-Chloronaphthalene	U		0.0126	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
4-Chloroaniline	U		0.0258	0.333	0.716	2	02/05/2021 18:16	WG1616776
4-Chlorophenyl-phenylether	U		0.0249	0.333	0.716	2	02/05/2021 18:16	WG1616776
Chrysene	0.122		0.0142	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Dibenz(a,h)anthracene	0.0200	J	0.0199	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Dibenzofuran	U		0.0234	0.333	0.716	2	02/05/2021 18:16	WG1616776
3,3-Dichlorobenzidine	U		0.0265	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,4-Dinitrotoluene	U		0.0205	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,6-Dinitrotoluene	U		0.0234	0.333	0.716	2	02/05/2021 18:16	WG1616776
Fluoranthene	0.208		0.0129	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Fluorene	U		0.0117	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Hexachlorobenzene	U		0.0254	0.333	0.716	2	02/05/2021 18:16	WG1616776
Hexachloro-1,3-butadiene	U		0.0241	0.333	0.716	2	02/05/2021 18:16	WG1616776
Hexachlorocyclopentadiene	U		0.0376	0.333	0.716	2	02/05/2021 18:16	WG1616776
Hexachloroethane	U		0.0282	0.333	0.716	2	02/05/2021 18:16	WG1616776
Indeno(1,2,3-cd)pyrene	0.0901		0.0202	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Isophorone	U		0.0219	0.333	0.716	2	02/05/2021 18:16	WG1616776
2-Methylnaphthalene	0.0269	J	0.00929	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Naphthalene	0.0299	J	0.0180	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
2-Nitroaniline	U		0.0230	0.333	0.716	2	02/05/2021 18:16	WG1616776
3-Nitroaniline	U		0.0228	0.333	0.716	2	02/05/2021 18:16	WG1616776
4-Nitroaniline	U		0.0209	0.333	0.716	2	02/05/2021 18:16	WG1616776
Nitrobenzene	U		0.0249	0.333	0.716	2	02/05/2021 18:16	WG1616776
n-Nitrosodimethylamine	U		0.106	0.333	0.716	2	02/05/2021 18:16	WG1616776
n-Nitrosodiphenylamine	U		0.0542	0.333	0.716	2	02/05/2021 18:16	WG1616776
n-Nitrosodi-n-propylamine	U		0.0239	0.333	0.716	2	02/05/2021 18:16	WG1616776
Phenanthrene	0.0776		0.0142	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Benzylbutyl phthalate	U		0.0224	0.333	0.716	2	02/05/2021 18:16	WG1616776
Bis(2-ethylhexyl)phthalate	U		0.0908	0.333	0.716	2	02/05/2021 18:16	WG1616776
Di-n-butyl phthalate	U		0.0245	0.333	0.716	2	02/05/2021 18:16	WG1616776
Diethyl phthalate	U		0.0237	0.333	0.716	2	02/05/2021 18:16	WG1616776
Dimethyl phthalate	U		0.152	0.333	0.716	2	02/05/2021 18:16	WG1616776
Di-n-octyl phthalate	U		0.0484	0.333	0.716	2	02/05/2021 18:16	WG1616776
Pyrene	0.277		0.0139	0.0333	0.0716	2	02/05/2021 18:16	WG1616776
Pyridine	U		0.0473	0.333	0.716	2	02/05/2021 18:16	WG1616776
1,2,4-Trichlorobenzene	U		0.0224	0.333	0.716	2	02/05/2021 18:16	WG1616776
4-Chloro-3-methylphenol	U		0.0232	0.333	0.716	2	02/05/2021 18:16	WG1616776
2-Chlorophenol	U		0.0237	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,4-Dichlorophenol	U		0.0209	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,4-Dimethylphenol	U		0.0187	0.333	0.716	2	02/05/2021 18:16	WG1616776
4,6-Dinitro-2-methylphenol	U		0.162	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,4-Dinitrophenol	U		0.168	0.333	0.716	2	02/05/2021 18:16	WG1616776
2-Methylphenol	U		0.0215	0.333	0.716	2	02/05/2021 18:16	WG1616776
3&4-Methyl Phenol	U		0.0224	0.333	0.716	2	02/05/2021 18:16	WG1616776
2-Nitrophenol	U		0.0256	0.333	0.716	2	02/05/2021 18:16	WG1616776
4-Nitrophenol	U		0.0224	0.333	0.716	2	02/05/2021 18:16	WG1616776

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Pentachlorophenol	U		0.0193	0.333	0.716	2	02/05/2021 18:16	WG1616776
Phenol	U		0.0288	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,4,5-Trichlorophenol	U		0.0243	0.333	0.716	2	02/05/2021 18:16	WG1616776
2,4,6-Trichlorophenol	U		0.0230	0.333	0.716	2	02/05/2021 18:16	WG1616776
(S) 2-Fluorophenol	*79.6*				*12.0-120*		*02/05/2021 18:16*	WG1616776
(S) Phenol-d5	*74.6*				*10.0-120*		*02/05/2021 18:16*	WG1616776
(S) Nitrobenzene-d5	*74.1*				*10.0-122*		*02/05/2021 18:16*	WG1616776
(S) 2-Fluorobiphenyl	*80.2*				*15.0-120*		*02/05/2021 18:16*	WG1616776
(S) 2,4,6-Tribromophenol	*88.9*				*10.0-127*		*02/05/2021 18:16*	WG1616776
(S) p-Terphenyl-d14	*89.3*				*10.0-120*		*02/05/2021 18:16*	WG1616776

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.5		1	02/03/2021 15:44	WG1614564

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	U		0.0226	0.0400	0.0503	1	02/02/2021 12:11	WG1614237

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	3.33		0.651	2.00	2.51	1	01/30/2021 19:54	WG1613802
Barium	165		0.107	0.500	0.629	1	01/30/2021 19:54	WG1613802
Cadmium	0.312	J	0.0592	0.500	0.629	1	01/30/2021 19:54	WG1613802
Chromium	15.5		0.167	1.00	1.26	1	01/30/2021 19:54	WG1613802
Lead	7.80		0.262	0.500	0.629	1	01/30/2021 19:54	WG1613802
Selenium	1.91	J	0.961	2.00	2.51	1	01/30/2021 19:54	WG1613802
Silver	U		0.160	1.00	1.26	1	01/30/2021 19:54	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U	J4	0.0565	0.0500	0.0774	1	01/30/2021 18:33	WG1613623
Benzene	U		0.000723	0.00100	0.00155	1	01/30/2021 18:33	WG1613623
Bromobenzene	U		0.00139	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
Bromochloromethane	U	J4	0.000873	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
Bromodichloromethane	U		0.00112	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Bromoform	U		0.00181	0.0250	0.0387	1	01/30/2021 18:33	WG1613623
Bromomethane	U		0.00305	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
n-Butylbenzene	U		0.00812	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
sec-Butylbenzene	U		0.00446	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
tert-Butylbenzene	U		0.00302	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
Carbon disulfide	U		0.00108	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
Carbon tetrachloride	U		0.00139	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
Chlorobenzene	U		0.000325	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Chlorodibromomethane	U		0.000947	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Chloroethane	U		0.00263	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
Chloroform	U		0.00159	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Chloromethane	U		0.00673	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
2-Chlorotoluene	U		0.00134	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
4-Chlorotoluene	U		0.000696	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,2-Dibromo-3-Chloropropane	U		0.00604	0.0250	0.0387	1	01/30/2021 18:33	WG1613623
1,2-Dibromoethane	U		0.00100	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Dibromomethane	U		0.00116	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,2-Dichlorobenzene	U		0.000658	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,3-Dichlorobenzene	U		0.000929	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,4-Dichlorobenzene	U		0.00108	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
Dichlorodifluoromethane	U		0.00249	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
1,1-Dichloroethane	U		0.000760	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
1,2-Dichloroethane	U		0.00100	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
1,1-Dichloroethene	U		0.000938	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
cis-1,2-Dichloroethene	U		0.00114	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
trans-1,2-Dichloroethene	U		0.00161	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,2-Dichloropropane	U		0.00220	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,1-Dichloropropene	U		0.00125	0.00250	0.00387	1	01/30/2021 18:33	WG1613623

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000775	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
cis-1,3-Dichloropropene	U		0.00117	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
trans-1,3-Dichloropropene	U		0.00176	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
2,2-Dichloropropane	U		0.00214	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Ethylbenzene	U		0.00114	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Hexachloro-1,3-butadiene	U		0.00929	0.0250	0.0387	1	01/30/2021 18:33	WG1613623
2-Hexanone	U		0.00520	0.0250	0.0387	1	01/30/2021 18:33	WG1613623
Isopropylbenzene	U		0.000658	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
p-Isopropyltoluene	U		0.00395	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
2-Butanone (MEK)	0.0986	J	0.0983	0.100	0.155	1	01/30/2021 18:33	WG1613623
Methylene Chloride	U		0.0103	0.0250	0.0387	1	01/30/2021 18:33	WG1613623
4-Methyl-2-pentanone (MIBK)	U		0.00353	0.0250	0.0387	1	01/30/2021 18:33	WG1613623
Methyl tert-butyl ether	U		0.000542	0.00100	0.00155	1	01/30/2021 18:33	WG1613623
Naphthalene	U		0.00755	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
n-Propylbenzene	U		0.00147	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
Styrene	U		0.000354	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
1,1,1,2-Tetrachloroethane	U		0.00147	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
1,1,2,2-Tetrachloroethane	U		0.00108	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Tetrachloroethene	U		0.00139	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Toluene	U		0.00201	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,2,3-Trichlorobenzene	U		0.0113	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
1,2,4-Trichlorobenzene	U		0.00681	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
1,1,1-Trichloroethane	U		0.00143	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
1,1,2-Trichloroethane	U		0.000924	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Trichloroethene	U		0.000904	0.00100	0.00155	1	01/30/2021 18:33	WG1613623
Trichlorofluoromethane	U		0.00128	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
1,2,3-Trichloropropane	U		0.00251	0.0125	0.0193	1	01/30/2021 18:33	WG1613623
1,2,4-Trimethylbenzene	U		0.00245	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
1,3,5-Trimethylbenzene	U		0.00310	0.00500	0.00774	1	01/30/2021 18:33	WG1613623
Vinyl chloride	U		0.00180	0.00250	0.00387	1	01/30/2021 18:33	WG1613623
Xylenes, Total	U		0.00136	0.00650	0.0101	1	01/30/2021 18:33	WG1613623
(S) Toluene-d8	*97.7*				*75.0-131*		*01/30/2021 18:33*	WG1613623
(S) 4-Bromofluorobenzene	*99.7*				*67.0-138*		*01/30/2021 18:33*	WG1613623
(S) 1,2-Dichloroethane-d4	*93.1*				*70.0-130*		*01/30/2021 18:33*	WG1613623

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		19.2	50.0	64.1	1.02	02/03/2021 19:38	WG1615114
TPH C12 - C28	U		19.2	50.0	64.1	1.02	02/03/2021 19:38	WG1615114
TPH C28 - C35	U		19.2	50.0	64.1	1.02	02/03/2021 19:38	WG1615114
TPH C6 - C35	U		19.2	50.0	64.1	1.02	02/03/2021 19:38	WG1615114
(S) o-Terphenyl	*81.6*				*70.0-130*		*02/03/2021 19:38*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00678	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Acenaphthylene	U		0.00590	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Anthracene	U		0.00746	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Benzo(a)anthracene	U		0.00738	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Benzo(b)fluoranthene	U		0.00781	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Benzo(k)fluoranthene	U		0.00744	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Benzo(g,h,i)perylene	U		0.00766	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Benzo(a)pyrene	U		0.00778	0.0333	0.0419	1	02/05/2021 15:51	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		0.148	1.67	2.10	1	02/05/2021 15:51	WG1616776
Benzyl alcohol	U		0.0155	0.333	0.419	1	02/05/2021 15:51	WG1616776
Bis(2-chlorethoxy)methane	U		0.0126	0.333	0.419	1	02/05/2021 15:51	WG1616776
Bis(2-chloroethyl)ether	U		0.0138	0.333	0.419	1	02/05/2021 15:51	WG1616776
2,2-Oxybis(1-Chloropropane)	U		0.0181	0.333	0.419	1	02/05/2021 15:51	WG1616776
4-Bromophenyl-phenylether	U		0.0147	0.333	0.419	1	02/05/2021 15:51	WG1616776
Carbazole	U		0.0130	0.333	0.419	1	02/05/2021 15:51	WG1616776
2-Chloronaphthalene	U		0.00736	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
4-Chloroaniline	U		0.0151	0.333	0.419	1	02/05/2021 15:51	WG1616776
4-Chlorophenyl-phenylether	U		0.0146	0.333	0.419	1	02/05/2021 15:51	WG1616776
Chrysene	U		0.00832	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Dibenz(a,h)anthracene	U		0.0116	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Dibenzofuran	U		0.0137	0.333	0.419	1	02/05/2021 15:51	WG1616776
3,3-Dichlorobenzidine	U		0.0155	0.333	0.419	1	02/05/2021 15:51	WG1616776
2,4-Dinitrotoluene	U		0.0120	0.333	0.419	1	02/05/2021 15:51	WG1616776
2,6-Dinitrotoluene	U		0.0137	0.333	0.419	1	02/05/2021 15:51	WG1616776
Fluoranthene	U		0.00756	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Fluorene	U		0.00682	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Hexachlorobenzene	U		0.0148	0.333	0.419	1	02/05/2021 15:51	WG1616776
Hexachloro-1,3-butadiene	U		0.0141	0.333	0.419	1	02/05/2021 15:51	WG1616776
Hexachlorocyclopentadiene	U		0.0220	0.333	0.419	1	02/05/2021 15:51	WG1616776
Hexachloroethane	U		0.0165	0.333	0.419	1	02/05/2021 15:51	WG1616776
Indeno(1,2,3-cd)pyrene	U		0.0118	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Isophorone	U		0.0128	0.333	0.419	1	02/05/2021 15:51	WG1616776
2-Methylnaphthalene	U		0.00543	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Naphthalene	U		0.0105	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
2-Nitroaniline	U		0.0135	0.333	0.419	1	02/05/2021 15:51	WG1616776
3-Nitroaniline	U		0.0133	0.333	0.419	1	02/05/2021 15:51	WG1616776
4-Nitroaniline	U		0.0122	0.333	0.419	1	02/05/2021 15:51	WG1616776
Nitrobenzene	U		0.0146	0.333	0.419	1	02/05/2021 15:51	WG1616776
n-Nitrosodimethylamine	U		0.0621	0.333	0.419	1	02/05/2021 15:51	WG1616776
n-Nitrosodiphenylamine	U		0.0317	0.333	0.419	1	02/05/2021 15:51	WG1616776
n-Nitrosodi-n-propylamine	U		0.0140	0.333	0.419	1	02/05/2021 15:51	WG1616776
Phenanthrene	U		0.00831	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Benzylbutyl phthalate	U		0.0131	0.333	0.419	1	02/05/2021 15:51	WG1616776
Bis(2-ethylhexyl)phthalate	U		0.0531	0.333	0.419	1	02/05/2021 15:51	WG1616776
Di-n-butyl phthalate	U		0.0143	0.333	0.419	1	02/05/2021 15:51	WG1616776
Diethyl phthalate	U		0.0138	0.333	0.419	1	02/05/2021 15:51	WG1616776
Dimethyl phthalate	U		0.0888	0.333	0.419	1	02/05/2021 15:51	WG1616776
Di-n-octyl phthalate	U		0.0283	0.333	0.419	1	02/05/2021 15:51	WG1616776
Pyrene	U		0.00815	0.0333	0.0419	1	02/05/2021 15:51	WG1616776
Pyridine	U		0.0277	0.333	0.419	1	02/05/2021 15:51	WG1616776
1,2,4-Trichlorobenzene	U		0.0131	0.333	0.419	1	02/05/2021 15:51	WG1616776
4-Chloro-3-methylphenol	U		0.0136	0.333	0.419	1	02/05/2021 15:51	WG1616776
2-Chlorophenol	U		0.0138	0.333	0.419	1	02/05/2021 15:51	WG1616776
2,4-Dichlorophenol	U		0.0122	0.333	0.419	1	02/05/2021 15:51	WG1616776
2,4-Dimethylphenol	U		0.0109	0.333	0.419	1	02/05/2021 15:51	WG1616776
4,6-Dinitro-2-methylphenol	U		0.0949	0.333	0.419	1	02/05/2021 15:51	WG1616776
2,4-Dinitrophenol	U		0.0980	0.333	0.419	1	02/05/2021 15:51	WG1616776
2-Methylphenol	U		0.0126	0.333	0.419	1	02/05/2021 15:51	WG1616776
3&4-Methyl Phenol	U		0.0131	0.333	0.419	1	02/05/2021 15:51	WG1616776
2-Nitrophenol	U		0.0150	0.333	0.419	1	02/05/2021 15:51	WG1616776
4-Nitrophenol	U		0.0131	0.333	0.419	1	02/05/2021 15:51	WG1616776
Pentachlorophenol	U		0.0113	0.333	0.419	1	02/05/2021 15:51	WG1616776
Phenol	U		0.0168	0.333	0.419	1	02/05/2021 15:51	WG1616776
2,4,5-Trichlorophenol	U		0.0142	0.333	0.419	1	02/05/2021 15:51	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.0135	0.333	0.419	1	02/05/2021 15:51	WG1616776
(S) 2-Fluorophenol	*65.6*				*12.0-120*		*02/05/2021 15:51*	WG1616776
(S) Phenol-d5	*57.8*				*10.0-120*		*02/05/2021 15:51*	WG1616776
(S) Nitrobenzene-d5	*58.7*				*10.0-122*		*02/05/2021 15:51*	WG1616776
(S) 2-Fluorobiphenyl	*66.3*				*15.0-120*		*02/05/2021 15:51*	WG1616776
(S) 2,4,6-Tribromophenol	*67.9*				*10.0-127*		*02/05/2021 15:51*	WG1616776
(S) p-Terphenyl-d14	*70.8*				*10.0-120*		*02/05/2021 15:51*	WG1616776

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.9		1	02/03/2021 15:44	WG1614564

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0588		0.0200	0.0400	0.0445	1	02/02/2021 12:18	WG1614237

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	14.0		0.577	2.00	2.23	1	01/30/2021 19:57	WG1613802
Barium	491		0.0948	0.500	0.556	1	01/30/2021 19:57	WG1613802
Cadmium	1.31		0.0524	0.500	0.556	1	01/30/2021 19:57	WG1613802
Chromium	76.1		0.148	1.00	1.11	1	01/30/2021 19:57	WG1613802
Lead	76.6		0.231	0.500	0.556	1	01/30/2021 19:57	WG1613802
Selenium	2.00	J	0.850	2.00	2.23	1	01/30/2021 19:57	WG1613802
Silver	U		0.141	1.00	1.11	1	01/30/2021 19:57	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U	J4	0.0606	0.0500	0.0830	1.39	01/30/2021 18:52	WG1613623
Benzene	U		0.000775	0.00100	0.00166	1.39	01/30/2021 18:52	WG1613623
Bromobenzene	U		0.00149	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
Bromochloromethane	U	J4	0.000936	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
Bromodichloromethane	U		0.00120	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Bromoform	U		0.00194	0.0250	0.0416	1.39	01/30/2021 18:52	WG1613623
Bromomethane	U		0.00327	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
n-Butylbenzene	U		0.00872	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
sec-Butylbenzene	U		0.00478	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
tert-Butylbenzene	U		0.00324	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
Carbon disulfide	U		0.00116	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
Carbon tetrachloride	U		0.00149	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
Chlorobenzene	U		0.000349	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Chlorodibromomethane	U		0.00102	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Chloroethane	U		0.00282	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
Chloroform	U		0.00171	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Chloromethane	U		0.00722	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
2-Chlorotoluene	U		0.00144	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
4-Chlorotoluene	U		0.000747	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,2-Dibromo-3-Chloropropane	U		0.00647	0.0250	0.0416	1.39	01/30/2021 18:52	WG1613623
1,2-Dibromoethane	U		0.00108	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Dibromomethane	U		0.00125	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,2-Dichlorobenzene	U		0.000706	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,3-Dichlorobenzene	U		0.000996	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,4-Dichlorobenzene	U		0.00116	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
Dichlorodifluoromethane	U		0.00267	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
1,1-Dichloroethane	U		0.000815	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
1,2-Dichloroethane	U		0.00108	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
1,1-Dichloroethene	U		0.00101	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
cis-1,2-Dichloroethene	U		0.00122	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
trans-1,2-Dichloroethene	U		0.00173	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,2-Dichloropropane	U		0.00236	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,1-Dichloropropene	U		0.00134	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000832	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
cis-1,3-Dichloropropene	U		0.00126	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
trans-1,3-Dichloropropene	U		0.00189	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
2,2-Dichloropropane	U		0.00229	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Ethylbenzene	0.00166	J	0.00122	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Hexachloro-1,3-butadiene	U		0.00996	0.0250	0.0416	1.39	01/30/2021 18:52	WG1613623
2-Hexanone	U		0.00558	0.0250	0.0416	1.39	01/30/2021 18:52	WG1613623
Isopropylbenzene	0.00689		0.000706	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
p-Isopropyltoluene	U		0.00423	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
2-Butanone (MEK)	U		0.105	0.100	0.166	1.39	01/30/2021 18:52	WG1613623
Methylene Chloride	U		0.0110	0.0250	0.0416	1.39	01/30/2021 18:52	WG1613623
4-Methyl-2-pentanone (MIBK)	U		0.00379	0.0250	0.0416	1.39	01/30/2021 18:52	WG1613623
Methyl tert-butyl ether	U		0.000581	0.00100	0.00166	1.39	01/30/2021 18:52	WG1613623
Naphthalene	0.0183	J	0.00810	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
n-Propylbenzene	U		0.00158	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
Styrene	0.00124	J	0.000380	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
1,1,1,2-Tetrachloroethane	U		0.00157	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
1,1,2,2-Tetrachloroethane	U		0.00115	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Tetrachloroethene	U		0.00149	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Toluene	U		0.00216	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,2,3-Trichlorobenzene	U		0.0122	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
1,2,4-Trichlorobenzene	U		0.00731	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
1,1,1-Trichloroethane	U		0.00153	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
1,1,2-Trichloroethane	U		0.000991	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Trichloroethene	U		0.000970	0.00100	0.00166	1.39	01/30/2021 18:52	WG1613623
Trichlorofluoromethane	U		0.00137	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
1,2,3-Trichloropropane	U		0.00269	0.0125	0.0208	1.39	01/30/2021 18:52	WG1613623
1,2,4-Trimethylbenzene	0.00377	J	0.00262	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
1,3,5-Trimethylbenzene	U		0.00332	0.00500	0.00830	1.39	01/30/2021 18:52	WG1613623
Vinyl chloride	U		0.00193	0.00250	0.00416	1.39	01/30/2021 18:52	WG1613623
Xylenes, Total	0.00984	J	0.00146	0.00650	0.0108	1.39	01/30/2021 18:52	WG1613623
(S) Toluene-d8	*97.8*				*75.0-131*		*01/30/2021 18:52*	WG1613623
(S) 4-Bromofluorobenzene	*97.4*				*67.0-138*		*01/30/2021 18:52*	WG1613623
(S) 1,2-Dichloroethane-d4	*84.8*				*70.0-130*		*01/30/2021 18:52*	WG1613623

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.7	50.0	55.6	1	02/03/2021 19:54	WG1615114
TPH C12 - C28	U		16.7	50.0	55.6	1	02/03/2021 19:54	WG1615114
TPH C28 - C35	U		16.7	50.0	55.6	1	02/03/2021 19:54	WG1615114
TPH C6 - C35	U		16.7	50.0	55.6	1	02/03/2021 19:54	WG1615114
(S) o-Terphenyl	*81.2*				*70.0-130*		*02/03/2021 19:54*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0600	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Acenaphthylene	0.177	J	0.0522	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Anthracene	0.197	J	0.0660	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Benzo(a)anthracene	0.430		0.0653	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Benzo(b)fluoranthene	1.57		0.0691	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Benzo(k)fluoranthene	0.424		0.0659	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Benzo(g,h,i)perylene	0.355	J	0.0678	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Benzo(a)pyrene	0.662		0.0689	0.0333	0.371	10	02/05/2021 19:05	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U	J6	1.31	1.67	18.6	10	02/05/2021 19:05	WG1616776
Benzyl alcohol	U		0.137	0.333	3.71	10	02/05/2021 19:05	WG1616776
Bis(2-chlorethoxy)methane	U		0.111	0.333	3.71	10	02/05/2021 19:05	WG1616776
Bis(2-chloroethyl)ether	U		0.122	0.333	3.71	10	02/05/2021 19:05	WG1616776
2,2-Oxybis(1-Chloropropane)	U		0.160	0.333	3.71	10	02/05/2021 19:05	WG1616776
4-Bromophenyl-phenylether	U		0.130	0.333	3.71	10	02/05/2021 19:05	WG1616776
Carbazole	U		0.115	0.333	3.71	10	02/05/2021 19:05	WG1616776
2-Chloronaphthalene	U		0.0651	0.0333	0.371	10	02/05/2021 19:05	WG1616776
4-Chloroaniline	U		0.134	0.333	3.71	10	02/05/2021 19:05	WG1616776
4-Chlorophenyl-phenylether	U		0.129	0.333	3.71	10	02/05/2021 19:05	WG1616776
Chrysene	0.483		0.0737	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Dibenz(a,h)anthracene	U		0.103	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Dibenzofuran	U		0.121	0.333	3.71	10	02/05/2021 19:05	WG1616776
3,3-Dichlorobenzidine	U		0.137	0.333	3.71	10	02/05/2021 19:05	WG1616776
2,4-Dinitrotoluene	U		0.106	0.333	3.71	10	02/05/2021 19:05	WG1616776
2,6-Dinitrotoluene	U		0.121	0.333	3.71	10	02/05/2021 19:05	WG1616776
Fluoranthene	0.521		0.0669	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Fluorene	U		0.0603	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Hexachlorobenzene	U		0.131	0.333	3.71	10	02/05/2021 19:05	WG1616776
Hexachloro-1,3-butadiene	U		0.125	0.333	3.71	10	02/05/2021 19:05	WG1616776
Hexachlorocyclopentadiene	U	J6	0.195	0.333	3.71	10	02/05/2021 19:05	WG1616776
Hexachloroethane	U		0.146	0.333	3.71	10	02/05/2021 19:05	WG1616776
Indeno(1,2,3-cd)pyrene	0.322	J	0.105	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Isophorone	U		0.114	0.333	3.71	10	02/05/2021 19:05	WG1616776
2-Methylnaphthalene	U		0.0481	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Naphthalene	U		0.0930	0.0333	0.371	10	02/05/2021 19:05	WG1616776
2-Nitroaniline	U		0.119	0.333	3.71	10	02/05/2021 19:05	WG1616776
3-Nitroaniline	U		0.118	0.333	3.71	10	02/05/2021 19:05	WG1616776
4-Nitroaniline	U		0.108	0.333	3.71	10	02/05/2021 19:05	WG1616776
Nitrobenzene	U		0.129	0.333	3.71	10	02/05/2021 19:05	WG1616776
n-Nitrosodimethylamine	U	J6	0.550	0.333	3.71	10	02/05/2021 19:05	WG1616776
n-Nitrosodiphenylamine	U		0.280	0.333	3.71	10	02/05/2021 19:05	WG1616776
n-Nitrosodi-n-propylamine	U		0.124	0.333	3.71	10	02/05/2021 19:05	WG1616776
Phenanthrene	0.105	J	0.0736	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Benzylbutyl phthalate	U		0.116	0.333	3.71	10	02/05/2021 19:05	WG1616776
Bis(2-ethylhexyl)phthalate	U		0.470	0.333	3.71	10	02/05/2021 19:05	WG1616776
Di-n-butyl phthalate	U		0.127	0.333	3.71	10	02/05/2021 19:05	WG1616776
Diethyl phthalate	U		0.122	0.333	3.71	10	02/05/2021 19:05	WG1616776
Dimethyl phthalate	U	J6	0.786	0.333	3.71	10	02/05/2021 19:05	WG1616776
Di-n-octyl phthalate	U		0.250	0.333	3.71	10	02/05/2021 19:05	WG1616776
Pyrene	0.755		0.0721	0.0333	0.371	10	02/05/2021 19:05	WG1616776
Pyridine	U	J6	0.245	0.333	3.71	10	02/05/2021 19:05	WG1616776
1,2,4-Trichlorobenzene	U		0.116	0.333	3.71	10	02/05/2021 19:05	WG1616776
4-Chloro-3-methylphenol	U		0.120	0.333	3.71	10	02/05/2021 19:05	WG1616776
2-Chlorophenol	U		0.122	0.333	3.71	10	02/05/2021 19:05	WG1616776
2,4-Dichlorophenol	U		0.108	0.333	3.71	10	02/05/2021 19:05	WG1616776
2,4-Dimethylphenol	U		0.0968	0.333	3.71	10	02/05/2021 19:05	WG1616776
4,6-Dinitro-2-methylphenol	U	J5	0.840	0.333	3.71	10	02/05/2021 19:05	WG1616776
2,4-Dinitrophenol	U	J3 J5 J6	0.867	0.333	3.71	10	02/05/2021 19:05	WG1616776
2-Methylphenol	U		0.111	0.333	3.71	10	02/05/2021 19:05	WG1616776
3&4-Methyl Phenol	U		0.116	0.333	3.71	10	02/05/2021 19:05	WG1616776
2-Nitrophenol	U		0.132	0.333	3.71	10	02/05/2021 19:05	WG1616776
4-Nitrophenol	U		0.116	0.333	3.71	10	02/05/2021 19:05	WG1616776
Pentachlorophenol	U		0.0997	0.333	3.71	10	02/05/2021 19:05	WG1616776
Phenol	U		0.149	0.333	3.71	10	02/05/2021 19:05	WG1616776
2,4,5-Trichlorophenol	U		0.126	0.333	3.71	10	02/05/2021 19:05	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.119	0.333	3.71	10	02/05/2021 19:05	WG1616776
(S) 2-Fluorophenol	*84.0*				*12.0-120*		*02/05/2021 19:05*	WG1616776
(S) Phenol-d5	*72.7*				*10.0-120*		*02/05/2021 19:05*	WG1616776
(S) Nitrobenzene-d5	*72.3*				*10.0-122*		*02/05/2021 19:05*	WG1616776
(S) 2-Fluorobiphenyl	*82.8*				*15.0-120*		*02/05/2021 19:05*	WG1616776
(S) 2,4,6-Tribromophenol	*80.4*				*10.0-127*		*02/05/2021 19:05*	WG1616776
(S) p-Terphenyl-d14	*97.5*				*10.0-120*		*02/05/2021 19:05*	WG1616776

Sample Narrative:

L1311179-22 WG1616776: Diluted due to matrix impact

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	02/03/2021 15:44	WG1614564

Wet Chemistry by Method 9045D

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
pH	8.45	T8	1	02/02/2021 00:57	WG1614203

Sample Narrative:

L1311179-23 WG1614203: 8.45 at 21.1C

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.0230	J	0.0213	0.0400	0.0474	1	02/02/2021 12:21	WG1614237

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	8.25		0.614	2.00	2.37	1	01/30/2021 20:00	WG1613802
Barium	199		0.101	0.500	0.593	1	01/30/2021 20:00	WG1613802
Cadmium	0.456	J	0.0559	0.500	0.593	1	01/30/2021 20:00	WG1613802
Chromium	19.1		0.158	1.00	1.19	1	01/30/2021 20:00	WG1613802
Lead	35.8		0.247	0.500	0.593	1	01/30/2021 20:00	WG1613802
Selenium	1.39	J	0.906	2.00	2.37	1	01/30/2021 20:00	WG1613802
Silver	U		0.151	1.00	1.19	1	01/30/2021 20:00	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U	J4	0.0526	0.0500	0.0721	1	01/30/2021 19:11	WG1613623
Benzene	U		0.000673	0.00100	0.00144	1	01/30/2021 19:11	WG1613623
Bromobenzene	U		0.00130	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
Bromochloromethane	U	J4	0.000813	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
Bromodichloromethane	U		0.00105	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Bromoform	U		0.00169	0.0250	0.0360	1	01/30/2021 19:11	WG1613623
Bromomethane	U		0.00284	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
n-Butylbenzene	U		0.00757	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
sec-Butylbenzene	U		0.00415	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
tert-Butylbenzene	U		0.00281	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
Carbon disulfide	U		0.00101	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
Carbon tetrachloride	U		0.00129	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
Chlorobenzene	U		0.000303	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Chlorodibromomethane	U		0.000882	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Chloroethane	U		0.00245	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
Chloroform	U		0.00148	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Chloromethane	U		0.00627	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
2-Chlorotoluene	U		0.00125	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
4-Chlorotoluene	U		0.000649	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,2-Dibromo-3-Chloropropane	U		0.00562	0.0250	0.0360	1	01/30/2021 19:11	WG1613623
1,2-Dibromoethane	U		0.000934	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Dibromomethane	U		0.00108	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,2-Dichlorobenzene	U		0.000613	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,3-Dichlorobenzene	U		0.000865	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,4-Dichlorobenzene	U		0.00101	0.00500	0.00721	1	01/30/2021 19:11	WG1613623

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00232	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
1,1-Dichloroethane	U		0.000708	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
1,2-Dichloroethane	U		0.000936	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
1,1-Dichloroethene	U		0.000874	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
cis-1,2-Dichloroethene	U		0.00106	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
trans-1,2-Dichloroethene	U		0.00150	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,2-Dichloropropane	U		0.00205	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,1-Dichloropropene	U		0.00117	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
1,3-Dichloropropane	U		0.000722	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
cis-1,3-Dichloropropene	U		0.00109	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
trans-1,3-Dichloropropene	U		0.00164	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
2,2-Dichloropropane	U		0.00199	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Ethylbenzene	U		0.00106	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Hexachloro-1,3-butadiene	U		0.00865	0.0250	0.0360	1	01/30/2021 19:11	WG1613623
2-Hexanone	U		0.00484	0.0250	0.0360	1	01/30/2021 19:11	WG1613623
Isopropylbenzene	U		0.000613	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
p-Isopropyltoluene	U		0.00368	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
2-Butanone (MEK)	U		0.0915	0.100	0.144	1	01/30/2021 19:11	WG1613623
Methylene Chloride	U		0.00957	0.0250	0.0360	1	01/30/2021 19:11	WG1613623
4-Methyl-2-pentanone (MIBK)	U		0.00329	0.0250	0.0360	1	01/30/2021 19:11	WG1613623
Methyl tert-butyl ether	U		0.000505	0.00100	0.00144	1	01/30/2021 19:11	WG1613623
Naphthalene	U		0.00703	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
n-Propylbenzene	U		0.00137	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
Styrene	0.000369	J	0.000330	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
1,1,1,2-Tetrachloroethane	U		0.00137	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
1,1,2,2-Tetrachloroethane	U		0.00100	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Tetrachloroethene	U		0.00129	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Toluene	U		0.00187	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,2,3-Trichlorobenzene	U		0.0106	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
1,2,4-Trichlorobenzene	U		0.00634	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
1,1,1-Trichloroethane	U		0.00133	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
1,1,2-Trichloroethane	U		0.000861	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Trichloroethene	U		0.000842	0.00100	0.00144	1	01/30/2021 19:11	WG1613623
Trichlorofluoromethane	U		0.00119	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
1,2,3-Trichloropropane	U		0.00234	0.0125	0.0180	1	01/30/2021 19:11	WG1613623
1,2,4-Trimethylbenzene	U		0.00228	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
1,3,5-Trimethylbenzene	U		0.00288	0.00500	0.00721	1	01/30/2021 19:11	WG1613623
Vinyl chloride	U		0.00167	0.00250	0.00360	1	01/30/2021 19:11	WG1613623
Xylenes, Total	0.00441	J	0.00127	0.00650	0.00937	1	01/30/2021 19:11	WG1613623
(S) Toluene-d8	*98.8*				*75.0-131*		*01/30/2021 19:11*	WG1613623
(S) 4-Bromofluorobenzene	*99.4*				*67.0-138*		*01/30/2021 19:11*	WG1613623
(S) 1,2-Dichloroethane-d4	*87.6*				*70.0-130*		*01/30/2021 19:11*	WG1613623

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		17.8	50.0	59.3	1	02/03/2021 20:08	WG1615114
TPH C12 - C28	U		17.8	50.0	59.3	1	02/03/2021 20:08	WG1615114
TPH C28 - C35	U		17.8	50.0	59.3	1	02/03/2021 20:08	WG1615114
TPH C6 - C35	U		17.8	50.0	59.3	1	02/03/2021 20:08	WG1615114
(S) o-Terphenyl	*79.7*				*70.0-130*		*02/03/2021 20:08*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00639	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Acenaphthylene	0.0685		0.00556	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Anthracene	0.222		0.00703	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Benzo(a)anthracene	0.130		0.00696	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Benzo(b)fluoranthene	0.430		0.00736	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Benzo(k)fluoranthene	0.126		0.00702	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Benzo(g,h,i)perylene	0.277		0.00722	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Benzo(a)pyrene	0.193		0.00734	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Benzoic acid	U		0.140	1.67	1.98	1	02/05/2021 17:28	WG1616776
Benzyl alcohol	U		0.0146	0.333	0.395	1	02/05/2021 17:28	WG1616776
Bis(2-chlorethoxy)methane	U		0.0119	0.333	0.395	1	02/05/2021 17:28	WG1616776
Bis(2-chloroethyl)ether	U		0.0130	0.333	0.395	1	02/05/2021 17:28	WG1616776
2,2-Oxybis(1-Chloropropane)	U		0.0171	0.333	0.395	1	02/05/2021 17:28	WG1616776
4-Bromophenyl-phenylether	U		0.0139	0.333	0.395	1	02/05/2021 17:28	WG1616776
Carbazole	0.0827	J	0.0122	0.333	0.395	1	02/05/2021 17:28	WG1616776
2-Chloronaphthalene	U		0.00694	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
4-Chloroaniline	U		0.0142	0.333	0.395	1	02/05/2021 17:28	WG1616776
4-Chlorophenyl-phenylether	U		0.0138	0.333	0.395	1	02/05/2021 17:28	WG1616776
Chrysene	0.140		0.00785	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Dibenz(a,h)anthracene	0.0234	J	0.0109	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Dibenzofuran	U		0.0129	0.333	0.395	1	02/05/2021 17:28	WG1616776
3,3-Dichlorobenzidine	U		0.0146	0.333	0.395	1	02/05/2021 17:28	WG1616776
2,4-Dinitrotoluene	U		0.0113	0.333	0.395	1	02/05/2021 17:28	WG1616776
2,6-Dinitrotoluene	U		0.0129	0.333	0.395	1	02/05/2021 17:28	WG1616776
Fluoranthene	0.192		0.00713	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Fluorene	0.00828	J	0.00643	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Hexachlorobenzene	U		0.0140	0.333	0.395	1	02/05/2021 17:28	WG1616776
Hexachloro-1,3-butadiene	U		0.0133	0.333	0.395	1	02/05/2021 17:28	WG1616776
Hexachlorocyclopentadiene	U		0.0208	0.333	0.395	1	02/05/2021 17:28	WG1616776
Hexachloroethane	U		0.0155	0.333	0.395	1	02/05/2021 17:28	WG1616776
Indeno(1,2,3-cd)pyrene	0.125		0.0112	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Isophorone	U		0.0121	0.333	0.395	1	02/05/2021 17:28	WG1616776
2-Methylnaphthalene	0.00611	J	0.00512	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Naphthalene	U		0.00991	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
2-Nitroaniline	U		0.0127	0.333	0.395	1	02/05/2021 17:28	WG1616776
3-Nitroaniline	U		0.0126	0.333	0.395	1	02/05/2021 17:28	WG1616776
4-Nitroaniline	U		0.0115	0.333	0.395	1	02/05/2021 17:28	WG1616776
Nitrobenzene	U		0.0138	0.333	0.395	1	02/05/2021 17:28	WG1616776
n-Nitrosodimethylamine	U		0.0586	0.333	0.395	1	02/05/2021 17:28	WG1616776
n-Nitrosodiphenylamine	U		0.0299	0.333	0.395	1	02/05/2021 17:28	WG1616776
n-Nitrosodi-n-propylamine	U		0.0132	0.333	0.395	1	02/05/2021 17:28	WG1616776
Phenanthrene	0.0370	J	0.00784	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Benzylbutyl phthalate	U		0.0123	0.333	0.395	1	02/05/2021 17:28	WG1616776
Bis(2-ethylhexyl)phthalate	U		0.0500	0.333	0.395	1	02/05/2021 17:28	WG1616776
Di-n-butyl phthalate	U		0.0135	0.333	0.395	1	02/05/2021 17:28	WG1616776
Diethyl phthalate	U		0.0130	0.333	0.395	1	02/05/2021 17:28	WG1616776
Dimethyl phthalate	U		0.0837	0.333	0.395	1	02/05/2021 17:28	WG1616776
Di-n-octyl phthalate	U		0.0267	0.333	0.395	1	02/05/2021 17:28	WG1616776
Pyrene	0.222		0.00768	0.0333	0.0395	1	02/05/2021 17:28	WG1616776
Pyridine	U		0.0261	0.333	0.395	1	02/05/2021 17:28	WG1616776
1,2,4-Trichlorobenzene	U		0.0123	0.333	0.395	1	02/05/2021 17:28	WG1616776
4-Chloro-3-methylphenol	U		0.0128	0.333	0.395	1	02/05/2021 17:28	WG1616776
2-Chlorophenol	U		0.0130	0.333	0.395	1	02/05/2021 17:28	WG1616776
2,4-Dichlorophenol	U		0.0115	0.333	0.395	1	02/05/2021 17:28	WG1616776
2,4-Dimethylphenol	U		0.0103	0.333	0.395	1	02/05/2021 17:28	WG1616776
4,6-Dinitro-2-methylphenol	U		0.0895	0.333	0.395	1	02/05/2021 17:28	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-Dinitrophenol	U		0.0924	0.333	0.395	1	02/05/2021 17:28	WG1616776
2-Methylphenol	U		0.0119	0.333	0.395	1	02/05/2021 17:28	WG1616776
3&4-Methyl Phenol	U		0.0123	0.333	0.395	1	02/05/2021 17:28	WG1616776
2-Nitrophenol	U		0.0141	0.333	0.395	1	02/05/2021 17:28	WG1616776
4-Nitrophenol	U		0.0123	0.333	0.395	1	02/05/2021 17:28	WG1616776
Pentachlorophenol	U		0.0106	0.333	0.395	1	02/05/2021 17:28	WG1616776
Phenol	U		0.0159	0.333	0.395	1	02/05/2021 17:28	WG1616776
2,4,5-Trichlorophenol	U		0.0134	0.333	0.395	1	02/05/2021 17:28	WG1616776
2,4,6-Trichlorophenol	U		0.0127	0.333	0.395	1	02/05/2021 17:28	WG1616776
(S) 2-Fluorophenol	*80.0*				*12.0-120*		*02/05/2021 17:28*	WG1616776
(S) Phenol-d5	*70.5*				*10.0-120*		*02/05/2021 17:28*	WG1616776
(S) Nitrobenzene-d5	*67.9*				*10.0-122*		*02/05/2021 17:28*	WG1616776
(S) 2-Fluorobiphenyl	*79.4*				*15.0-120*		*02/05/2021 17:28*	WG1616776
(S) 2,4,6-Tribromophenol	*86.4*				*10.0-127*		*02/05/2021 17:28*	WG1616776
(S) p-Terphenyl-d14	*79.4*				*10.0-120*		*02/05/2021 17:28*	WG1616776

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.0		1	02/03/2021 15:44	WG1614564

Mercury by Method 7471A

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Mercury	0.220		0.0196	0.0400	0.0435	1	02/02/2021 12:23	WG1614237

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	45.8		0.563	2.00	2.17	1	01/30/2021 20:08	WG1613802
Barium	1030		0.0926	0.500	0.544	1	01/30/2021 20:08	WG1613802
Cadmium	2.93		0.0512	0.500	0.544	1	01/30/2021 20:08	WG1613802
Chromium	55.9		0.145	1.00	1.09	1	01/30/2021 20:08	WG1613802
Lead	633		0.226	0.500	0.544	1	01/30/2021 20:08	WG1613802
Selenium	3.07		0.831	2.00	2.17	1	01/30/2021 20:08	WG1613802
Silver	0.400	J	0.138	1.00	1.09	1	01/30/2021 20:08	WG1613802

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Acetone	U	J4	0.0449	0.0500	0.0615	1	01/30/2021 19:30	WG1613623
Benzene	U		0.000575	0.00100	0.00123	1	01/30/2021 19:30	WG1613623
Bromobenzene	U		0.00111	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
Bromochloromethane	U	J4	0.000694	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
Bromodichloromethane	U		0.000892	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Bromoform	U		0.00144	0.0250	0.0308	1	01/30/2021 19:30	WG1613623
Bromomethane	U		0.00242	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
n-Butylbenzene	U		0.00646	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
sec-Butylbenzene	U		0.00354	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
tert-Butylbenzene	U		0.00240	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
Carbon disulfide	U		0.000862	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
Carbon tetrachloride	U		0.00111	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
Chlorobenzene	U		0.000258	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Chlorodibromomethane	U		0.000753	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Chloroethane	U		0.00209	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
Chloroform	U		0.00127	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Chloromethane	U		0.00535	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
2-Chlorotoluene	U		0.00106	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
4-Chlorotoluene	U		0.000554	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,2-Dibromo-3-Chloropropane	U		0.00480	0.0250	0.0308	1	01/30/2021 19:30	WG1613623
1,2-Dibromoethane	U		0.000798	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Dibromomethane	U		0.000923	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,2-Dichlorobenzene	U		0.000523	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,3-Dichlorobenzene	U		0.000738	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,4-Dichlorobenzene	U		0.000862	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
Dichlorodifluoromethane	U		0.00198	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
1,1-Dichloroethane	U		0.000604	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
1,2-Dichloroethane	U		0.000799	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
1,1-Dichloroethene	U		0.000746	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
cis-1,2-Dichloroethene	U		0.000903	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
trans-1,2-Dichloroethene	U		0.00128	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,2-Dichloropropane	U		0.00175	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,1-Dichloropropene	U		0.000996	0.00250	0.00308	1	01/30/2021 19:30	WG1613623

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,3-Dichloropropane	U		0.000617	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
cis-1,3-Dichloropropene	U		0.000932	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
trans-1,3-Dichloropropene	U		0.00140	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
2,2-Dichloropropane	U		0.00170	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Ethylbenzene	U		0.000907	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Hexachloro-1,3-butadiene	U		0.00738	0.0250	0.0308	1	01/30/2021 19:30	WG1613623
2-Hexanone	U		0.00414	0.0250	0.0308	1	01/30/2021 19:30	WG1613623
Isopropylbenzene	U		0.000523	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
p-Isopropyltoluene	U		0.00314	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
2-Butanone (MEK)	U		0.0782	0.100	0.123	1	01/30/2021 19:30	WG1613623
Methylene Chloride	U		0.00817	0.0250	0.0308	1	01/30/2021 19:30	WG1613623
4-Methyl-2-pentanone (MIBK)	U		0.00281	0.0250	0.0308	1	01/30/2021 19:30	WG1613623
Methyl tert-butyl ether	U		0.000431	0.00100	0.00123	1	01/30/2021 19:30	WG1613623
Naphthalene	U		0.00601	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
n-Propylbenzene	U		0.00117	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
Styrene	U		0.000282	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
1,1,1,2-Tetrachloroethane	U		0.00117	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
1,1,2,2-Tetrachloroethane	U		0.000855	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Tetrachloroethene	U		0.00110	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Toluene	U		0.00160	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,2,3-Trichlorobenzene	U		0.00902	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
1,2,4-Trichlorobenzene	U		0.00542	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
1,1,1-Trichloroethane	U		0.00114	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
1,1,2-Trichloroethane	U		0.000735	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Trichloroethene	U		0.000719	0.00100	0.00123	1	01/30/2021 19:30	WG1613623
Trichlorofluoromethane	U		0.00102	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
1,2,3-Trichloropropane	U		0.00199	0.0125	0.0154	1	01/30/2021 19:30	WG1613623
1,2,4-Trimethylbenzene	U		0.00194	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
1,3,5-Trimethylbenzene	U		0.00246	0.00500	0.00615	1	01/30/2021 19:30	WG1613623
Vinyl chloride	U		0.00143	0.00250	0.00308	1	01/30/2021 19:30	WG1613623
Xylenes, Total	0.00426	J	0.00108	0.00650	0.00800	1	01/30/2021 19:30	WG1613623
(S) Toluene-d8	*97.1*				*75.0-131*		*01/30/2021 19:30*	WG1613623
(S) 4-Bromofluorobenzene	*101*				*67.0-138*		*01/30/2021 19:30*	WG1613623
(S) 1,2-Dichloroethane-d4	*92.3*				*70.0-130*		*01/30/2021 19:30*	WG1613623

TPH by TCEQ Method 1005

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH C6 - C12	U		16.3	50.0	54.4	1	02/03/2021 21:26	WG1615114
TPH C12 - C28	U		16.3	50.0	54.4	1	02/03/2021 21:26	WG1615114
TPH C28 - C35	U		16.3	50.0	54.4	1	02/03/2021 21:26	WG1615114
TPH C6 - C35	U		16.3	50.0	54.4	1	02/03/2021 21:26	WG1615114
(S) o-Terphenyl	*80.4*				*70.0-130*		*02/03/2021 21:26*	WG1615114

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0586	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Acenaphthylene	0.112	J	0.0510	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Anthracene	0.189	J	0.0645	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Benzo(a)anthracene	0.195	J	0.0638	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Benzo(b)fluoranthene	0.712	J	0.135	0.0333	0.724	20	02/05/2021 20:50	WG1616776
Benzo(k)fluoranthene	0.227	J	0.129	0.0333	0.724	20	02/05/2021 20:50	WG1616776
Benzo(g,h,i)perylene	0.241	J	0.132	0.0333	0.724	20	02/05/2021 20:50	WG1616776
Benzo(a)pyrene	0.320	J	0.135	0.0333	0.724	20	02/05/2021 20:50	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzoic acid	U		1.28	1.67	18.2	10	02/05/2021 18:41	WG1616776
Benzyl alcohol	U		0.134	0.333	3.62	10	02/05/2021 18:41	WG1616776
Bis(2-chlorethoxy)methane	U		0.109	0.333	3.62	10	02/05/2021 18:41	WG1616776
Bis(2-chloroethyl)ether	U		0.120	0.333	3.62	10	02/05/2021 18:41	WG1616776
2,2-Oxybis(1-Chloropropane)	U		0.157	0.333	3.62	10	02/05/2021 18:41	WG1616776
4-Bromophenyl-phenylether	U		0.127	0.333	3.62	10	02/05/2021 18:41	WG1616776
Carbazole	U		0.112	0.333	3.62	10	02/05/2021 18:41	WG1616776
2-Chloronaphthalene	U		0.0636	0.0333	0.362	10	02/05/2021 18:41	WG1616776
4-Chloroaniline	U		0.130	0.333	3.62	10	02/05/2021 18:41	WG1616776
4-Chlorophenyl-phenylether	U		0.126	0.333	3.62	10	02/05/2021 18:41	WG1616776
Chrysene	0.307	J	0.0720	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Dibenz(a,h)anthracene	U		0.201	0.0333	0.724	20	02/05/2021 20:50	WG1616776
Dibenzofuran	U		0.118	0.333	3.62	10	02/05/2021 18:41	WG1616776
3,3-Dichlorobenzidine	U		0.134	0.333	3.62	10	02/05/2021 18:41	WG1616776
2,4-Dinitrotoluene	U		0.104	0.333	3.62	10	02/05/2021 18:41	WG1616776
2,6-Dinitrotoluene	U		0.118	0.333	3.62	10	02/05/2021 18:41	WG1616776
Fluoranthene	0.312	J	0.0653	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Fluorene	U		0.0589	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Hexachlorobenzene	U		0.128	0.333	3.62	10	02/05/2021 18:41	WG1616776
Hexachloro-1,3-butadiene	U		0.122	0.333	3.62	10	02/05/2021 18:41	WG1616776
Hexachlorocyclopentadiene	U		0.190	0.333	3.62	10	02/05/2021 18:41	WG1616776
Hexachloroethane	U		0.142	0.333	3.62	10	02/05/2021 18:41	WG1616776
Indeno(1,2,3-cd)pyrene	U		0.205	0.0333	0.724	20	02/05/2021 20:50	WG1616776
Isophorone	U		0.111	0.333	3.62	10	02/05/2021 18:41	WG1616776
2-Methylnaphthalene	U		0.0470	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Naphthalene	U		0.0909	0.0333	0.362	10	02/05/2021 18:41	WG1616776
2-Nitroaniline	U		0.116	0.333	3.62	10	02/05/2021 18:41	WG1616776
3-Nitroaniline	U		0.115	0.333	3.62	10	02/05/2021 18:41	WG1616776
4-Nitroaniline	U		0.106	0.333	3.62	10	02/05/2021 18:41	WG1616776
Nitrobenzene	U		0.126	0.333	3.62	10	02/05/2021 18:41	WG1616776
n-Nitrosodimethylamine	U		0.537	0.333	3.62	10	02/05/2021 18:41	WG1616776
n-Nitrosodiphenylamine	U		0.274	0.333	3.62	10	02/05/2021 18:41	WG1616776
n-Nitrosodi-n-propylamine	U		0.121	0.333	3.62	10	02/05/2021 18:41	WG1616776
Phenanthrene	U		0.0719	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Benzylbutyl phthalate	U		0.113	0.333	3.62	10	02/05/2021 18:41	WG1616776
Bis(2-ethylhexyl)phthalate	U		0.459	0.333	3.62	10	02/05/2021 18:41	WG1616776
Di-n-butyl phthalate	U		0.124	0.333	3.62	10	02/05/2021 18:41	WG1616776
Diethyl phthalate	U		0.120	0.333	3.62	10	02/05/2021 18:41	WG1616776
Dimethyl phthalate	U		0.768	0.333	3.62	10	02/05/2021 18:41	WG1616776
Di-n-octyl phthalate	U		0.245	0.333	3.62	10	02/05/2021 18:41	WG1616776
Pyrene	0.381		0.0704	0.0333	0.362	10	02/05/2021 18:41	WG1616776
Pyridine	U		0.239	0.333	3.62	10	02/05/2021 18:41	WG1616776
1,2,4-Trichlorobenzene	U		0.113	0.333	3.62	10	02/05/2021 18:41	WG1616776
4-Chloro-3-methylphenol	U		0.117	0.333	3.62	10	02/05/2021 18:41	WG1616776
2-Chlorophenol	U		0.120	0.333	3.62	10	02/05/2021 18:41	WG1616776
2,4-Dichlorophenol	U		0.105	0.333	3.62	10	02/05/2021 18:41	WG1616776
2,4-Dimethylphenol	U		0.0946	0.333	3.62	10	02/05/2021 18:41	WG1616776
4,6-Dinitro-2-methylphenol	U		0.821	0.333	3.62	10	02/05/2021 18:41	WG1616776
2,4-Dinitrophenol	U		0.847	0.333	3.62	10	02/05/2021 18:41	WG1616776
2-Methylphenol	U		0.109	0.333	3.62	10	02/05/2021 18:41	WG1616776
3&4-Methyl Phenol	U		0.113	0.333	3.62	10	02/05/2021 18:41	WG1616776
2-Nitrophenol	U		0.129	0.333	3.62	10	02/05/2021 18:41	WG1616776
4-Nitrophenol	U		0.113	0.333	3.62	10	02/05/2021 18:41	WG1616776
Pentachlorophenol	U		0.0974	0.333	3.62	10	02/05/2021 18:41	WG1616776
Phenol	U		0.146	0.333	3.62	10	02/05/2021 18:41	WG1616776
2,4,5-Trichlorophenol	U		0.123	0.333	3.62	10	02/05/2021 18:41	WG1616776

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	SDL (dry) mg/kg	Unadj. MQL mg/kg	MQL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4,6-Trichlorophenol	U		0.116	0.333	3.62	10	02/05/2021 18:41	WG1616776
(S) 2-Fluorophenol	*74.8*				*12.0-120*		*02/05/2021 18:41*	WG1616776
(S) 2-Fluorophenol	*75.3*	J7			*12.0-120*		*02/05/2021 20:50*	WG1616776
(S) Phenol-d5	*61.1*				*10.0-120*		*02/05/2021 18:41*	WG1616776
(S) Phenol-d5	*72.3*	J7			*10.0-120*		*02/05/2021 20:50*	WG1616776
(S) Nitrobenzene-d5	*73.9*				*10.0-122*		*02/05/2021 18:41*	WG1616776
(S) Nitrobenzene-d5	*68.9*	J7			*10.0-122*		*02/05/2021 20:50*	WG1616776
(S) 2-Fluorobiphenyl	*78.0*	J7			*15.0-120*		*02/05/2021 20:50*	WG1616776
(S) 2-Fluorobiphenyl	*74.8*				*15.0-120*		*02/05/2021 18:41*	WG1616776
(S) 2,4,6-Tribromophenol	*75.4*				*10.0-127*		*02/05/2021 18:41*	WG1616776
(S) 2,4,6-Tribromophenol	*65.0*	J7			*10.0-127*		*02/05/2021 20:50*	WG1616776
(S) p-Terphenyl-d14	*81.1*	J7			*10.0-120*		*02/05/2021 20:50*	WG1616776
(S) p-Terphenyl-d14	*84.9*				*10.0-120*		*02/05/2021 18:41*	WG1616776

Sample Narrative:

L1311179-24 WG1616776: IS/SURR failed on lower dilution.

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0113	0.0500	0.0500	1	01/29/2021 15:04	WG1613518
Acrolein	U	J4	0.00254	0.0500	0.0500	1	01/29/2021 15:04	WG1613518
Acrylonitrile	U		0.000671	0.0100	0.0100	1	01/29/2021 15:04	WG1613518
Benzene	U		0.0000941	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Bromobenzene	U		0.000118	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Bromochloromethane	U		0.000128	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Bromodichloromethane	U		0.000136	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Bromoform	U		0.000129	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Bromomethane	U		0.000605	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
n-Butylbenzene	U		0.000157	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
sec-Butylbenzene	U		0.000125	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
tert-Butylbenzene	U		0.000127	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Carbon disulfide	U		0.0000962	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Carbon tetrachloride	U		0.000128	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Chlorobenzene	U		0.000116	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Chlorodibromomethane	U		0.000140	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Chloroethane	U		0.000192	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
Chloroform	U		0.000111	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
Chloromethane	U		0.000960	0.00250	0.00250	1	01/29/2021 15:04	WG1613518
2-Chlorotoluene	U		0.000106	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
4-Chlorotoluene	U		0.000114	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
1,2-Dibromoethane	U		0.000126	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Dibromomethane	U		0.000122	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,2-Dichlorobenzene	U		0.000107	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,3-Dichlorobenzene	U		0.000110	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,4-Dichlorobenzene	U		0.000120	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Dichlorodifluoromethane	U		0.000374	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
1,1-Dichloroethane	U		0.000100	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,2-Dichloroethane	U		0.0000819	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,1-Dichloroethene	U		0.000188	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
cis-1,2-Dichloroethene	U		0.000126	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
trans-1,2-Dichloroethene	U		0.000149	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,2-Dichloropropane	U		0.000149	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,1-Dichloropropene	U		0.000142	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,3-Dichloropropane	U		0.000110	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
cis-1,3-Dichloropropene	U		0.000111	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
trans-1,3-Dichloropropene	U		0.000118	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
2,2-Dichloropropane	U		0.000161	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Di-isopropyl ether	U		0.000105	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Ethylbenzene	U		0.000137	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Hexachloro-1,3-butadiene	U		0.000337	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
2-Hexanone	U		0.000787	0.0100	0.0100	1	01/29/2021 15:04	WG1613518
Isopropylbenzene	U		0.000105	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
p-Isopropyltoluene	U		0.000120	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
2-Butanone (MEK)	U		0.00119	0.0100	0.0100	1	01/29/2021 15:04	WG1613518
Methylene Chloride	U		0.000430	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	0.0100	1	01/29/2021 15:04	WG1613518
Methyl tert-butyl ether	U		0.000101	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Naphthalene	U		0.00100	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
n-Propylbenzene	U		0.0000993	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Styrene	U		0.000118	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Tetrachloroethene	U		0.000300	0.00100	0.00100	1	01/29/2021 15:04	WG1613518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Toluene	U		0.000278	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,2,4-Trichlorobenzene	U		0.000481	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,1,1-Trichloroethane	U		0.000149	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,1,2-Trichloroethane	U		0.000158	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Trichloroethene	U		0.000190	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Trichlorofluoromethane	U		0.000160	0.00500	0.00500	1	01/29/2021 15:04	WG1613518
1,2,3-Trichloropropane	U		0.000237	0.00250	0.00250	1	01/29/2021 15:04	WG1613518
1,2,4-Trimethylbenzene	U		0.000322	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,2,3-Trimethylbenzene	U	J4	0.000104	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
1,3,5-Trimethylbenzene	U		0.000104	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Vinyl chloride	U		0.000234	0.00100	0.00100	1	01/29/2021 15:04	WG1613518
Xylenes, Total	U		0.000174	0.00300	0.00300	1	01/29/2021 15:04	WG1613518
(S) Toluene-d8	*103*				*80.0-120*		*01/29/2021 15:04*	WG1613518
(S) 4-Bromofluorobenzene	*91.5*				*77.0-126*		*01/29/2021 15:04*	WG1613518
(S) 1,2-Dichloroethane-d4	*91.9*				*70.0-130*		*01/29/2021 15:04*	WG1613518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0113	0.0500	0.0500	1	01/29/2021 15:25	WG1613518
Acrolein	U	J4	0.00254	0.0500	0.0500	1	01/29/2021 15:25	WG1613518
Acrylonitrile	U		0.000671	0.0100	0.0100	1	01/29/2021 15:25	WG1613518
Benzene	U		0.0000941	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Bromobenzene	U		0.000118	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Bromochloromethane	U		0.000128	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Bromodichloromethane	U		0.000136	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Bromoform	U		0.000129	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Bromomethane	U		0.000605	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
n-Butylbenzene	U		0.000157	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
sec-Butylbenzene	U		0.000125	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
tert-Butylbenzene	U		0.000127	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Carbon disulfide	U		0.0000962	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Carbon tetrachloride	U		0.000128	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Chlorobenzene	U		0.000116	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Chlorodibromomethane	U		0.000140	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Chloroethane	U		0.000192	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
Chloroform	U		0.000111	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
Chloromethane	U		0.000960	0.00250	0.00250	1	01/29/2021 15:25	WG1613518
2-Chlorotoluene	U		0.000106	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
4-Chlorotoluene	U		0.000114	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
1,2-Dibromoethane	U		0.000126	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Dibromomethane	U		0.000122	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,2-Dichlorobenzene	U		0.000107	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,3-Dichlorobenzene	U		0.000110	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,4-Dichlorobenzene	U		0.000120	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Dichlorodifluoromethane	U		0.000374	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
1,1-Dichloroethane	U		0.000100	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,2-Dichloroethane	U		0.0000819	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,1-Dichloroethene	U		0.000188	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
cis-1,2-Dichloroethene	U		0.000126	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
trans-1,2-Dichloroethene	U		0.000149	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,2-Dichloropropane	U		0.000149	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,1-Dichloropropene	U		0.000142	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,3-Dichloropropane	U		0.000110	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
cis-1,3-Dichloropropene	U		0.000111	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
trans-1,3-Dichloropropene	U		0.000118	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
2,2-Dichloropropane	U		0.000161	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Di-isopropyl ether	U		0.000105	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Ethylbenzene	U		0.000137	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Hexachloro-1,3-butadiene	U		0.000337	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
2-Hexanone	U		0.000787	0.0100	0.0100	1	01/29/2021 15:25	WG1613518
Isopropylbenzene	U		0.000105	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
p-Isopropyltoluene	U		0.000120	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
2-Butanone (MEK)	U		0.00119	0.0100	0.0100	1	01/29/2021 15:25	WG1613518
Methylene Chloride	U		0.000430	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	0.0100	1	01/29/2021 15:25	WG1613518
Methyl tert-butyl ether	U		0.000101	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Naphthalene	U		0.00100	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
n-Propylbenzene	U		0.0000993	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Styrene	U		0.000118	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Tetrachloroethene	U		0.000300	0.00100	0.00100	1	01/29/2021 15:25	WG1613518

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Toluene	U		0.000278	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,2,3-Trichlorobenzene	U		0.000230	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,2,4-Trichlorobenzene	U		0.000481	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,1,1-Trichloroethane	U		0.000149	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,1,2-Trichloroethane	U		0.000158	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Trichloroethene	U		0.000190	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Trichlorofluoromethane	U		0.000160	0.00500	0.00500	1	01/29/2021 15:25	WG1613518
1,2,3-Trichloropropane	U		0.000237	0.00250	0.00250	1	01/29/2021 15:25	WG1613518
1,2,4-Trimethylbenzene	U		0.000322	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,2,3-Trimethylbenzene	U	J4	0.000104	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
1,3,5-Trimethylbenzene	U		0.000104	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Vinyl chloride	U		0.000234	0.00100	0.00100	1	01/29/2021 15:25	WG1613518
Xylenes, Total	U		0.000174	0.00300	0.00300	1	01/29/2021 15:25	WG1613518
(S) Toluene-d8	*102*				*80.0-120*		*01/29/2021 15:25*	WG1613518
(S) 4-Bromofluorobenzene	*90.8*				*77.0-126*		*01/29/2021 15:25*	WG1613518
(S) 1,2-Dichloroethane-d4	*91.7*				*70.0-130*		*01/29/2021 15:25*	WG1613518

Method Blank (MB)

(MB) R3618867-1 02/02/21 16:16

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1311105-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1311105-01 02/02/21 16:16 • (DUP) R3618867-3 02/02/21 16:16

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	78.7	79.4	1	0.941		10

Laboratory Control Sample (LCS)

(LCS) R3618867-2 02/02/21 16:16

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3619300-1 02/03/21 14:57

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1311179-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1311179-07 02/03/21 14:57 • (DUP) R3619300-3 02/03/21 14:57

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	87.7	85.5	1	2.57		10

Laboratory Control Sample (LCS)

(LCS) R3619300-2 02/03/21 14:57

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3619302-1 02/03/21 15:44

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

L1311179-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1311179-17 02/03/21 15:44 • (DUP) R3619302-3 02/03/21 15:44

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	88.7	90.7	1	2.19		10

Laboratory Control Sample (LCS)

(LCS) R3619302-2 02/03/21 15:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

L1311179-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1311179-08 02/02/21 00:57 • (DUP) R3618347-2 02/02/21 00:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.35	8.38	1	0.359		1

Sample Narrative:

OS: 8.35 at 20.6C

DUP: 8.38 at 20.2C

L1311655-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1311655-11 02/02/21 00:57 • (DUP) R3618347-3 02/02/21 00:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.02	8.03	1	0.125		1

Sample Narrative:

OS: 8.02 at 20.6C

DUP: 8.03 at 19.4C

Laboratory Control Sample (LCS)

(LCS) R3618347-1 02/02/21 00:57

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10.03 at 19.3C

L1311750-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1311750-01 02/03/21 11:35 • (DUP) R3618928-2 02/03/21 11:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	9.29	9.37	1	0.857		1

Sample Narrative:

OS: 9.29 at 19C

DUP: 9.37 at 22C

L1312461-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1312461-01 02/03/21 11:35 • (DUP) R3618928-3 02/03/21 11:35

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.92	7.95	1	0.378		1

Sample Narrative:

OS: 7.92 at 18.5C

DUP: 7.95 at 21.4C

Laboratory Control Sample (LCS)

(LCS) R3618928-1 02/03/21 11:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
pH	10.0	10.1	101	99.0-101	

Sample Narrative:

LCS: 10.05 at 21.5C

Method Blank (MB)

(MB) R3618926-1 02/03/21 09:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3618926-2 02/03/21 09:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.500	99.9	80.0-120	

L1311179-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311179-03 02/03/21 09:12 • (MS) R3618926-3 02/03/21 09:15 • (MSD) R3618926-4 02/03/21 09:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.596	0.104	0.637	0.738	89.5	106	1	75.0-125			14.6	20

Method Blank (MB)

(MB) R3618558-1 02/02/21 11:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3618558-2 02/02/21 12:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.508	102	80.0-120	

L1311270-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311270-02 02/02/21 12:03 • (MS) R3618558-3 02/02/21 12:06 • (MSD) R3618558-4 02/02/21 12:08

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.625	U	0.721	0.674	115	108	1	75.0-125			6.72	20

Method Blank (MB)

(MB) R3618776-1 02/02/21 23:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.518	2.00
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500
Selenium	U		0.764	2.00
Silver	U		0.127	1.00

Laboratory Control Sample (LCS)

(LCS) R3618776-2 02/03/21 00:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	92.2	92.2	80.0-120	
Barium	100	97.8	97.8	80.0-120	
Cadmium	100	93.1	93.1	80.0-120	
Chromium	100	96.3	96.3	80.0-120	
Lead	100	96.5	96.5	80.0-120	
Selenium	100	93.2	93.2	80.0-120	
Silver	20.0	18.9	94.4	80.0-120	

L1310748-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310748-03 02/03/21 00:03 • (MS) R3618776-5 02/03/21 00:11 • (MSD) R3618776-6 02/03/21 00:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	124	4.65	114	108	88.2	83.2	1	75.0-125			5.53	20
Barium	124	260	361	346	81.3	69.4	1	75.0-125		J6	4.19	20
Cadmium	124	0.209	113	106	90.5	84.8	1	75.0-125			6.52	20
Chromium	124	20.1	136	129	93.0	87.4	1	75.0-125			5.31	20
Lead	124	13.1	137	128	99.5	92.1	1	75.0-125			7.01	20
Selenium	124	1.72	113	107	89.4	84.8	1	75.0-125			5.14	20
Silver	24.9	U	22.5	21.1	90.6	84.8	1	75.0-125			6.60	20

Method Blank (MB)

(MB) R3618009-1 01/30/21 19:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.518	2.00
Barium	U		0.0852	0.500
Cadmium	U		0.0471	0.500
Chromium	U		0.133	1.00
Lead	U		0.208	0.500
Selenium	U		0.764	2.00
Silver	U		0.127	1.00

Laboratory Control Sample (LCS)

(LCS) R3618009-2 01/30/21 19:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	93.5	93.5	80.0-120	
Barium	100	100	100	80.0-120	
Cadmium	100	93.2	93.2	80.0-120	
Chromium	100	94.7	94.7	80.0-120	
Lead	100	101	101	80.0-120	
Selenium	100	91.1	91.1	80.0-120	
Silver	20.0	18.3	91.3	80.0-120	

L1311179-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311179-17 01/30/21 19:08 • (MS) R3618009-5 01/30/21 19:16 • (MSD) R3618009-6 01/30/21 19:19

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	113	25.5	156	145	116	106	1	75.0-125			7.11	20
Barium	113	296	402	371	93.6	66.3	1	75.0-125		J6	7.97	20
Cadmium	113	1.26	110	111	96.3	97.5	1	75.0-125			1.18	20
Chromium	113	73.6	161	172	77.3	87.3	1	75.0-125			6.74	20
Lead	113	60.2	229	187	150	113	1	75.0-125	J5		20.0	20
Selenium	113	2.66	107	106	92.5	91.9	1	75.0-125			0.564	20
Silver	22.5	U	22.1	22.5	98.2	99.8	1	75.0-125			1.59	20

Method Blank (MB)

(MB) R3618633-4 01/29/21 11:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Acrolein	U		0.00254	0.0500
Acrylonitrile	U		0.000671	0.0100
Benzene	U		0.0000941	0.00100
Bromobenzene	U		0.000118	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromochloromethane	U		0.000128	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
2-Chlorotoluene	U		0.000106	0.00100
4-Chlorotoluene	U		0.000114	0.00100
1,2-Dibromo-3-Chloropropane	U		0.000276	0.00500
1,2-Dibromoethane	U		0.000126	0.00100
Dibromomethane	U		0.000122	0.00100
1,2-Dichlorobenzene	U		0.000107	0.00100
1,3-Dichlorobenzene	U		0.000110	0.00100
1,4-Dichlorobenzene	U		0.000120	0.00100
Dichlorodifluoromethane	U		0.000374	0.00500
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
1,1-Dichloropropene	U		0.000142	0.00100
1,3-Dichloropropane	U		0.000110	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
2,2-Dichloropropane	U		0.000161	0.00100
Di-isopropyl ether	U		0.000105	0.00100

Method Blank (MB)

(MB) R3618633-4 01/29/21 11:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,1,2-Tetrachloroethane	U		0.000147	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000180	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000481	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
Trichlorofluoromethane	U		0.000160	0.00500
1,2,3-Trichloropropane	U		0.000237	0.00250
1,2,3-Trimethylbenzene	U		0.000104	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.0*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*91.9*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3618633-1 01/29/21 09:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0215	86.0	19.0-160	
Acrolein	0.0250	0.0430	172	10.0-160	J4
Acrylonitrile	0.0250	0.0231	92.4	55.0-149	
Benzene	0.00500	0.00465	93.0	70.0-123	
Bromobenzene	0.00500	0.00471	94.2	73.0-121	
Bromodichloromethane	0.00500	0.00449	89.8	75.0-120	
Bromochloromethane	0.00500	0.00489	97.8	76.0-122	
Bromoform	0.00500	0.00472	94.4	68.0-132	
Bromomethane	0.00500	0.00535	107	10.0-160	
n-Butylbenzene	0.00500	0.00496	99.2	73.0-125	
sec-Butylbenzene	0.00500	0.00516	103	75.0-125	
tert-Butylbenzene	0.00500	0.00488	97.6	76.0-124	
Carbon disulfide	0.00500	0.00544	109	61.0-128	
Carbon tetrachloride	0.00500	0.00478	95.6	68.0-126	
Chlorobenzene	0.00500	0.00471	94.2	80.0-121	
Chlorodibromomethane	0.00500	0.00500	100	77.0-125	
Chloroethane	0.00500	0.00525	105	47.0-150	
Chloroform	0.00500	0.00504	101	73.0-120	
Chloromethane	0.00500	0.00513	103	41.0-142	
2-Chlorotoluene	0.00500	0.00491	98.2	76.0-123	
4-Chlorotoluene	0.00500	0.00480	96.0	75.0-122	
1,2-Dibromo-3-Chloropropane	0.00500	0.00432	86.4	58.0-134	
1,2-Dibromoethane	0.00500	0.00479	95.8	80.0-122	
Dibromomethane	0.00500	0.00496	99.2	80.0-120	
1,2-Dichlorobenzene	0.00500	0.00517	103	79.0-121	
1,3-Dichlorobenzene	0.00500	0.00495	99.0	79.0-120	
1,4-Dichlorobenzene	0.00500	0.00494	98.8	79.0-120	
Dichlorodifluoromethane	0.00500	0.00526	105	51.0-149	
1,1-Dichloroethane	0.00500	0.00437	87.4	70.0-126	
1,2-Dichloroethane	0.00500	0.00477	95.4	70.0-128	
1,1-Dichloroethene	0.00500	0.00499	99.8	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00464	92.8	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00526	105	73.0-120	
1,2-Dichloropropane	0.00500	0.00480	96.0	77.0-125	
1,1-Dichloropropene	0.00500	0.00506	101	74.0-126	
1,3-Dichloropropane	0.00500	0.00480	96.0	80.0-120	
cis-1,3-Dichloropropene	0.00500	0.00477	95.4	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00472	94.4	78.0-124	
2,2-Dichloropropane	0.00500	0.00553	111	58.0-130	
Di-isopropyl ether	0.00500	0.00406	81.2	58.0-138	

Laboratory Control Sample (LCS)

(LCS) R3618633-1 01/29/21 09:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.00500	0.00474	94.8	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00501	100	54.0-138	
2-Hexanone	0.0250	0.0215	86.0	67.0-149	
Isopropylbenzene	0.00500	0.00473	94.6	76.0-127	
p-Isopropyltoluene	0.00500	0.00492	98.4	76.0-125	
2-Butanone (MEK)	0.0250	0.0204	81.6	44.0-160	
Methylene Chloride	0.00500	0.00541	108	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0214	85.6	68.0-142	
Methyl tert-butyl ether	0.00500	0.00465	93.0	68.0-125	
Naphthalene	0.00500	0.00509	102	54.0-135	
n-Propylbenzene	0.00500	0.00489	97.8	77.0-124	
Styrene	0.00500	0.00488	97.6	73.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00462	92.4	75.0-125	
1,1,2,2-Tetrachloroethane	0.00500	0.00521	104	65.0-130	
Tetrachloroethene	0.00500	0.00522	104	72.0-132	
Toluene	0.00500	0.00498	99.6	79.0-120	
1,1,2-Trichlorotrifluoroethane	0.00500	0.00492	98.4	69.0-132	
1,2,3-Trichlorobenzene	0.00500	0.00529	106	50.0-138	
1,2,4-Trichlorobenzene	0.00500	0.00483	96.6	57.0-137	
1,1,1-Trichloroethane	0.00500	0.00490	98.0	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00496	99.2	80.0-120	
Trichloroethene	0.00500	0.00449	89.8	78.0-124	
Trichlorofluoromethane	0.00500	0.00499	99.8	59.0-147	
1,2,3-Trichloropropane	0.00500	0.00529	106	73.0-130	
1,2,3-Trimethylbenzene	0.00500	0.00623	125	77.0-120	J4
1,2,4-Trimethylbenzene	0.00500	0.00506	101	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00494	98.8	76.0-122	
Vinyl chloride	0.00500	0.00516	103	67.0-131	
Xylenes, Total	0.0150	0.0139	92.7	79.0-123	
(S) Toluene-d8			*97.5*	*80.0-120*	
(S) 4-Bromofluorobenzene			*89.6*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*97.9*	*70.0-130*	

Method Blank (MB)

(MB) R3618631-3 01/30/21 02:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromochloromethane	U		0.000564	0.00500
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon disulfide	U		0.000700	0.0125
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
2-Hexanone	U		0.00336	0.0250

Method Blank (MB)

(MB) R3618631-3 01/30/21 02:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Isopropylbenzene	U		0.000425	0.00250
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*99.1*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.1*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618631-1 01/30/21 01:29 • (LCSD) R3618631-2 01/30/21 01:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.588	0.556	94.1	89.0	10.0-160			5.59	31
Benzene	0.125	0.112	0.114	89.6	91.2	70.0-123			1.77	20
Bromobenzene	0.125	0.111	0.110	88.8	88.0	73.0-121			0.905	20
Bromodichloromethane	0.125	0.114	0.117	91.2	93.6	73.0-121			2.60	20
Bromochloromethane	0.125	0.129	0.126	103	101	77.0-128			2.35	20
Bromoform	0.125	0.121	0.121	96.8	96.8	64.0-132			0.000	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618631-1 01/30/21 01:29 • (LCSD) R3618631-2 01/30/21 01:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromomethane	0.125	0.118	0.119	94.4	95.2	56.0-147			0.844	20
n-Butylbenzene	0.125	0.0998	0.0994	79.8	79.5	68.0-135			0.402	20
sec-Butylbenzene	0.125	0.104	0.102	83.2	81.6	74.0-130			1.94	20
tert-Butylbenzene	0.125	0.111	0.108	88.8	86.4	75.0-127			2.74	20
Carbon disulfide	0.125	0.104	0.103	83.2	82.4	56.0-133			0.966	20
Carbon tetrachloride	0.125	0.130	0.134	104	107	66.0-128			3.03	20
Chlorobenzene	0.125	0.110	0.110	88.0	88.0	76.0-128			0.000	20
Chlorodibromomethane	0.125	0.112	0.116	89.6	92.8	74.0-127			3.51	20
Chloroethane	0.125	0.130	0.122	104	97.6	61.0-134			6.35	20
Chloroform	0.125	0.120	0.122	96.0	97.6	72.0-123			1.65	20
Chloromethane	0.125	0.112	0.111	89.6	88.8	51.0-138			0.897	20
2-Chlorotoluene	0.125	0.102	0.0976	81.6	78.1	75.0-124			4.41	20
4-Chlorotoluene	0.125	0.110	0.107	88.0	85.6	75.0-124			2.76	20
1,2-Dibromo-3-Chloropropane	0.125	0.104	0.101	83.2	80.8	59.0-130			2.93	20
1,2-Dibromoethane	0.125	0.106	0.103	84.8	82.4	74.0-128			2.87	20
Dibromomethane	0.125	0.115	0.113	92.0	90.4	75.0-122			1.75	20
1,2-Dichlorobenzene	0.125	0.103	0.102	82.4	81.6	76.0-124			0.976	20
1,3-Dichlorobenzene	0.125	0.105	0.104	84.0	83.2	76.0-125			0.957	20
1,4-Dichlorobenzene	0.125	0.101	0.100	80.8	80.0	77.0-121			0.995	20
Dichlorodifluoromethane	0.125	0.127	0.129	102	103	43.0-156			1.56	20
1,1-Dichloroethane	0.125	0.111	0.114	88.8	91.2	70.0-127			2.67	20
1,2-Dichloroethane	0.125	0.116	0.117	92.8	93.6	65.0-131			0.858	20
1,1-Dichloroethene	0.125	0.119	0.119	95.2	95.2	65.0-131			0.000	20
cis-1,2-Dichloroethene	0.125	0.111	0.109	88.8	87.2	73.0-125			1.82	20
trans-1,2-Dichloroethene	0.125	0.111	0.112	88.8	89.6	71.0-125			0.897	20
1,2-Dichloropropane	0.125	0.105	0.109	84.0	87.2	74.0-125			3.74	20
1,1-Dichloropropene	0.125	0.118	0.118	94.4	94.4	73.0-125			0.000	20
1,3-Dichloropropane	0.125	0.101	0.0996	80.8	79.7	80.0-125		J4	1.40	20
cis-1,3-Dichloropropene	0.125	0.118	0.118	94.4	94.4	76.0-127			0.000	20
trans-1,3-Dichloropropene	0.125	0.113	0.112	90.4	89.6	73.0-127			0.889	20
2,2-Dichloropropane	0.125	0.102	0.104	81.6	83.2	59.0-135			1.94	20
Ethylbenzene	0.125	0.107	0.105	85.6	84.0	74.0-126			1.89	20
Hexachloro-1,3-butadiene	0.125	0.116	0.116	92.8	92.8	57.0-150			0.000	20
2-Hexanone	0.625	0.449	0.443	71.8	70.9	54.0-147			1.35	20
Isopropylbenzene	0.125	0.111	0.110	88.8	88.0	72.0-127			0.905	20
p-Isopropyltoluene	0.125	0.110	0.106	88.0	84.8	72.0-133			3.70	20
2-Butanone (MEK)	0.625	0.498	0.482	79.7	77.1	30.0-160			3.27	24
Methylene Chloride	0.125	0.109	0.110	87.2	88.0	68.0-123			0.913	20
4-Methyl-2-pentanone (MIBK)	0.625	0.468	0.465	74.9	74.4	56.0-143			0.643	20
Methyl tert-butyl ether	0.125	0.114	0.114	91.2	91.2	66.0-132			0.000	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618631-1 01/30/21 01:29 • (LCSD) R3618631-2 01/30/21 01:48

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.0989	0.0988	79.1	79.0	59.0-130			0.101	20
n-Propylbenzene	0.125	0.104	0.102	83.2	81.6	74.0-126			1.94	20
Styrene	0.125	0.105	0.105	84.0	84.0	72.0-127			0.000	20
1,1,1,2-Tetrachloroethane	0.125	0.117	0.111	93.6	88.8	74.0-129			5.26	20
1,1,2,2-Tetrachloroethane	0.125	0.0850	0.0849	68.0	67.9	68.0-128		J4	0.118	20
Tetrachloroethene	0.125	0.118	0.116	94.4	92.8	70.0-136			1.71	20
Toluene	0.125	0.112	0.111	89.6	88.8	75.0-121			0.897	20
1,2,3-Trichlorobenzene	0.125	0.101	0.105	80.8	84.0	59.0-139			3.88	20
1,2,4-Trichlorobenzene	0.125	0.110	0.107	88.0	85.6	62.0-137			2.76	20
1,1,1-Trichloroethane	0.125	0.121	0.123	96.8	98.4	69.0-126			1.64	20
1,1,2-Trichloroethane	0.125	0.106	0.104	84.8	83.2	78.0-123			1.90	20
Trichloroethene	0.125	0.140	0.133	112	106	76.0-126			5.13	20
Trichlorofluoromethane	0.125	0.131	0.132	105	106	61.0-142			0.760	20
1,2,3-Trichloropropane	0.125	0.0985	0.0956	78.8	76.5	67.0-129			2.99	20
1,2,4-Trimethylbenzene	0.125	0.105	0.103	84.0	82.4	70.0-126			1.92	20
1,3,5-Trimethylbenzene	0.125	0.107	0.107	85.6	85.6	73.0-127			0.000	20
Vinyl chloride	0.125	0.117	0.124	93.6	99.2	63.0-134			5.81	20
Xylenes, Total	0.375	0.323	0.327	86.1	87.2	72.0-127			1.23	20
(S) Toluene-d8				*97.2*	*95.7*	*75.0-131*				
(S) 4-Bromofluorobenzene				*103*	*101*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*105*	*106*	*70.0-130*				

L1311246-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311246-01 01/30/21 08:28 • (MS) R3618631-4 01/30/21 10:04 • (MSD) R3618631-5 01/30/21 10:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.483	U	0.554	0.373	80.7	54.5	1	10.0-160			38.9	40
Benzene	0.0965	U	0.159	0.0948	116	69.2	1	10.0-149		J3	50.6	37
Bromobenzene	0.0965	U	0.172	0.105	125	77.0	1	10.0-156		J3	47.8	38
Bromodichloromethane	0.0965	U	0.172	0.104	125	75.9	1	10.0-143		J3	49.2	37
Bromochloromethane	0.0965	U	0.177	0.104	130	75.9	1	10.0-155		J3	52.3	33
Bromoform	0.0965	U	0.170	0.107	124	78.4	1	10.0-146		J3	45.3	36
Bromomethane	0.0965	U	0.0971	0.0626	70.9	45.7	1	10.0-149		J3	43.2	38
n-Butylbenzene	0.0965	U	0.132	0.0803	96.7	58.7	1	10.0-160		J3	49.0	40
sec-Butylbenzene	0.0965	U	0.139	0.0856	102	62.5	1	10.0-159		J3	47.6	39
tert-Butylbenzene	0.0965	U	0.149	0.0935	109	68.3	1	10.0-156		J3	45.8	39
Carbon disulfide	0.0965	U	0.114	0.0686	83.0	50.1	1	10.0-145		J3	49.5	39
Carbon tetrachloride	0.0965	U	0.152	0.0883	111	64.5	1	10.0-145		J3	53.0	37

L1311246-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311246-01 01/30/21 08:28 • (MS) R3618631-4 01/30/21 10:04 • (MSD) R3618631-5 01/30/21 10:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chlorobenzene	0.0965	U	0.165	0.0996	120	72.7	1	10.0-152		J3	49.2	39
Chlorodibromomethane	0.0965	U	0.176	0.108	128	79.0	1	10.0-146		J3	47.8	37
Chloroethane	0.0965	U	0.0747	0.0466	54.5	34.0	1	10.0-146		J3	46.4	40
Chloroform	0.0965	U	0.162	0.0979	118	71.5	1	10.0-146		J3	49.2	37
Chloromethane	0.0965	U	0.133	0.0771	96.8	56.3	1	10.0-159		J3	52.9	37
2-Chlorotoluene	0.0965	U	0.148	0.0914	108	66.7	1	10.0-159		J3	47.0	38
4-Chlorotoluene	0.0965	U	0.162	0.0984	118	71.8	1	10.0-155		J3	48.8	39
1,2-Dibromo-3-Chloropropane	0.0965	U	0.127	0.0819	92.4	59.8	1	10.0-151		J3	42.9	39
1,2-Dibromoethane	0.0965	U	0.167	0.107	122	78.1	1	10.0-148		J3	44.1	34
Dibromomethane	0.0965	U	0.173	0.106	126	77.1	1	10.0-147		J3	48.5	35
1,2-Dichlorobenzene	0.0965	U	0.145	0.0931	106	68.0	1	10.0-155		J3	43.4	37
1,3-Dichlorobenzene	0.0965	U	0.150	0.0952	110	69.5	1	10.0-153		J3	44.9	38
1,4-Dichlorobenzene	0.0965	U	0.152	0.0931	111	68.0	1	10.0-151		J3	48.0	38
Dichlorodifluoromethane	0.0965	U	0.122	0.0669	89.2	48.8	1	10.0-160		J3	58.6	35
1,1-Dichloroethane	0.0965	U	0.156	0.0950	114	69.3	1	10.0-147		J3	48.7	37
1,2-Dichloroethane	0.0965	U	0.177	0.109	130	79.7	1	10.0-148		J3	47.6	35
1,1-Dichloroethene	0.0965	U	0.150	0.0893	110	65.2	1	10.0-155		J3	51.0	37
cis-1,2-Dichloroethene	0.0965	U	0.153	0.0879	112	64.1	1	10.0-149		J3	54.3	37
trans-1,2-Dichloroethene	0.0965	U	0.133	0.0813	97.0	59.4	1	10.0-150		J3	48.1	37
1,2-Dichloropropane	0.0965	U	0.177	0.107	130	78.4	1	10.0-148		J3	49.1	37
1,1-Dichloropropene	0.0965	U	0.148	0.0877	108	64.0	1	10.0-153		J3	50.9	35
1,3-Dichloropropane	0.0965	U	0.173	0.113	126	82.4	1	10.0-154		J3	42.2	35
cis-1,3-Dichloropropene	0.0965	U	0.177	0.113	130	82.3	1	10.0-151		J3	44.6	37
trans-1,3-Dichloropropene	0.0965	U	0.180	0.113	132	82.4	1	10.0-148		J3	46.0	37
2,2-Dichloropropane	0.0965	U	0.0894	0.0527	65.3	38.4	1	10.0-138		J3	51.7	36
Ethylbenzene	0.0965	U	0.148	0.0867	108	63.3	1	10.0-160		J3	52.0	38
Hexachloro-1,3-butadiene	0.0965	U	0.125	0.0809	91.2	59.1	1	10.0-160		J3	42.8	40
2-Hexanone	0.483	U	0.792	0.508	116	74.1	1	10.0-160		J3	43.7	36
Isopropylbenzene	0.0965	U	0.142	0.0854	104	62.4	1	10.0-155		J3	49.7	38
p-Isopropyltoluene	0.0965	U	0.146	0.0881	107	64.4	1	10.0-160		J3	49.5	40
2-Butanone (MEK)	0.483	U	0.907	0.626	132	91.3	1	10.0-160			36.7	40
Methylene Chloride	0.0965	U	0.156	0.0616	114	45.0	1	10.0-141		J3	86.8	37
4-Methyl-2-pentanone (MIBK)	0.483	U	0.825	0.539	120	78.7	1	10.0-160		J3	41.8	35
Methyl tert-butyl ether	0.0965	U	0.150	0.0911	110	66.5	1	11.0-147		J3	49.1	35
Naphthalene	0.0965	U	0.114	0.0752	83.5	54.9	1	10.0-160		J3	41.3	36
n-Propylbenzene	0.0965	U	0.148	0.0884	108	64.6	1	10.0-158		J3	50.2	38
Styrene	0.0965	U	0.156	0.0952	114	69.5	1	10.0-160		J3	48.4	40
1,1,1,2-Tetrachloroethane	0.0965	U	0.149	0.0931	109	68.0	1	10.0-149		J3	46.2	39
1,1,2,2-Tetrachloroethane	0.0965	U	0.123	0.0803	89.6	58.7	1	10.0-160		J3	41.8	35

L1311246-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311246-01 01/30/21 08:28 • (MS) R3618631-4 01/30/21 10:04 • (MSD) R3618631-5 01/30/21 10:23

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg				%	%		%			%	%
Tetrachloroethene	0.0965	U	0.145	0.0866	106	63.2	1	10.0-156		J3	50.3	39
Toluene	0.0965	0.00552	0.159	0.0950	112	65.3	1	10.0-156		J3	50.4	38
1,2,3-Trichlorobenzene	0.0965	U	0.120	0.0761	87.4	55.5	1	10.0-160		J3	44.5	40
1,2,4-Trichlorobenzene	0.0965	U	0.130	0.0802	94.9	58.5	1	10.0-160		J3	47.4	40
1,1,1-Trichloroethane	0.0965	U	0.148	0.0832	108	60.7	1	10.0-144		J3	55.8	35
1,1,2-Trichloroethane	0.0965	U	0.177	0.113	130	82.8	1	10.0-160		J3	44.0	35
Trichloroethene	0.0965	U	0.196	0.119	143	86.6	1	10.0-156		J3	49.1	38
Trichlorofluoromethane	0.0965	U	0.0747	0.0488	54.5	35.6	1	10.0-160		J3	41.8	40
1,2,3-Trichloropropane	0.0965	U	0.162	0.102	118	74.3	1	10.0-156		J3	45.6	35
1,2,4-Trimethylbenzene	0.0965	U	0.146	0.0870	107	63.5	1	10.0-160		J3	50.8	36
1,3,5-Trimethylbenzene	0.0965	U	0.146	0.0903	107	65.9	1	10.0-160		J3	47.3	38
Vinyl chloride	0.0965	U	0.127	0.0728	92.6	53.2	1	10.0-160		J3	54.2	37
Xylenes, Total	0.289	0.00200	0.447	0.273	109	65.9	1	10.0-160		J3	48.5	38
(S) Toluene-d8					*98.3*	*98.5*		*75.0-131*				
(S) 4-Bromofluorobenzene					*99.1*	*99.1*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*97.2*	*94.6*		*70.0-130*				

Method Blank (MB)

(MB) R3617765-2 01/30/21 03:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromochloromethane	U		0.000564	0.00500
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon disulfide	U		0.000700	0.0125
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
2-Hexanone	U		0.00336	0.0250

Method Blank (MB)

(MB) R3617765-2 01/30/21 03:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Isopropylbenzene	U		0.000425	0.00250
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	0.00135	J	0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	0.00280	J	0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*99.1*			*75.0-131*
(S) 4-Bromofluorobenzene	*105*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.8*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3617765-1 01/30/21 02:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.422	67.5	10.0-160	
Benzene	0.125	0.140	112	70.0-123	
Bromobenzene	0.125	0.142	114	73.0-121	
Bromodichloromethane	0.125	0.135	108	73.0-121	
Bromochloromethane	0.125	0.140	112	77.0-128	
Bromoform	0.125	0.135	108	64.0-132	

Laboratory Control Sample (LCS)

(LCS) R3617765-1 01/30/21 02:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromomethane	0.125	0.144	115	56.0-147	
n-Butylbenzene	0.125	0.123	98.4	68.0-135	
sec-Butylbenzene	0.125	0.138	110	74.0-130	
tert-Butylbenzene	0.125	0.144	115	75.0-127	
Carbon disulfide	0.125	0.159	127	56.0-133	
Carbon tetrachloride	0.125	0.154	123	66.0-128	
Chlorobenzene	0.125	0.144	115	76.0-128	
Chlorodibromomethane	0.125	0.144	115	74.0-127	
Chloroethane	0.125	0.161	129	61.0-134	
Chloroform	0.125	0.142	114	72.0-123	
Chloromethane	0.125	0.136	109	51.0-138	
2-Chlorotoluene	0.125	0.145	116	75.0-124	
4-Chlorotoluene	0.125	0.138	110	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.114	91.2	59.0-130	
1,2-Dibromoethane	0.125	0.139	111	74.0-128	
Dibromomethane	0.125	0.126	101	75.0-122	
1,2-Dichlorobenzene	0.125	0.135	108	76.0-124	
1,3-Dichlorobenzene	0.125	0.136	109	76.0-125	
1,4-Dichlorobenzene	0.125	0.134	107	77.0-121	
Dichlorodifluoromethane	0.125	0.162	130	43.0-156	
1,1-Dichloroethane	0.125	0.141	113	70.0-127	
1,2-Dichloroethane	0.125	0.121	96.8	65.0-131	
1,1-Dichloroethene	0.125	0.159	127	65.0-131	
cis-1,2-Dichloroethene	0.125	0.146	117	73.0-125	
trans-1,2-Dichloroethene	0.125	0.166	133	71.0-125	J4
1,2-Dichloropropane	0.125	0.148	118	74.0-125	
1,1-Dichloropropene	0.125	0.153	122	73.0-125	
1,3-Dichloropropane	0.125	0.136	109	80.0-125	
cis-1,3-Dichloropropene	0.125	0.145	116	76.0-127	
trans-1,3-Dichloropropene	0.125	0.142	114	73.0-127	
2,2-Dichloropropane	0.125	0.142	114	59.0-135	
Ethylbenzene	0.125	0.151	121	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.143	114	57.0-150	
2-Hexanone	0.625	0.645	103	54.0-147	
Isopropylbenzene	0.125	0.148	118	72.0-127	
p-Isopropyltoluene	0.125	0.137	110	72.0-133	
2-Butanone (MEK)	0.625	0.559	89.4	30.0-160	
Methylene Chloride	0.125	0.0916	73.3	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.594	95.0	56.0-143	
Methyl tert-butyl ether	0.125	0.129	103	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3617765-1 01/30/21 02:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.135	108	59.0-130	
n-Propylbenzene	0.125	0.139	111	74.0-126	
Styrene	0.125	0.142	114	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.139	111	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.109	87.2	68.0-128	
Tetrachloroethene	0.125	0.164	131	70.0-136	
Toluene	0.125	0.150	120	75.0-121	
1,2,3-Trichlorobenzene	0.125	0.145	116	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.142	114	62.0-137	
1,1,1-Trichloroethane	0.125	0.159	127	69.0-126	J4
1,1,2-Trichloroethane	0.125	0.149	119	78.0-123	
Trichloroethene	0.125	0.174	139	76.0-126	J4
Trichlorofluoromethane	0.125	0.145	116	61.0-142	
1,2,3-Trichloropropane	0.125	0.129	103	67.0-129	
1,2,4-Trimethylbenzene	0.125	0.142	114	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.142	114	73.0-127	
Vinyl chloride	0.125	0.139	111	63.0-134	
Xylenes, Total	0.375	0.432	115	72.0-127	
(S) Toluene-d8			*102*	*75.0-131*	
(S) 4-Bromofluorobenzene			*98.7*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*90.4*	*70.0-130*	

L1310897-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310897-12 01/30/21 03:19 • (MS) R3617765-3 01/30/21 09:40 • (MSD) R3617765-4 01/30/21 09:59

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	U	0.378	0.340	60.5	54.4	1	10.0-160			10.6	40
Benzene	0.125	0.00943	0.0970	0.114	70.1	83.7	1	10.0-149			16.1	37
Bromobenzene	0.125	U	0.0740	0.104	59.2	83.2	1	10.0-156			33.7	38
Bromodichloromethane	0.125	U	0.0787	0.0937	63.0	75.0	1	10.0-143			17.4	37
Bromochloromethane	0.125	U	0.0877	0.109	70.2	87.2	1	10.0-155			21.7	33
Bromoform	0.125	U	0.106	0.122	84.8	97.6	1	10.0-146			14.0	36
Bromomethane	0.125	U	0.0244	0.0455	19.5	36.4	1	10.0-149		J3	60.4	38
n-Butylbenzene	0.125	U	0.0616	0.0717	49.3	57.4	1	10.0-160			15.2	40
sec-Butylbenzene	0.125	U	0.0582	0.0781	46.6	62.5	1	10.0-159			29.2	39
tert-Butylbenzene	0.125	U	0.0582	0.0804	46.6	64.3	1	10.0-156			32.0	39
Carbon disulfide	0.125	U	0.0460	0.0585	36.8	46.8	1	10.0-145			23.9	39
Carbon tetrachloride	0.125	U	0.0526	0.0622	42.1	49.8	1	10.0-145			16.7	37

L1310897-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310897-12 01/30/21 03:19 • (MS) R3617765-3 01/30/21 09:40 • (MSD) R3617765-4 01/30/21 09:59

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chlorobenzene	0.125	U	0.0754	0.0901	60.3	72.1	1	10.0-152			17.8	39
Chlorodibromomethane	0.125	U	0.0944	0.117	75.5	93.6	1	10.0-146			21.4	37
Chloroethane	0.125	U	0.0111	0.0254	8.88	20.3	1	10.0-146	J6	J3	78.4	40
Chloroform	0.125	U	0.0703	0.0885	56.2	70.8	1	10.0-146			22.9	37
Chloromethane	0.125	U	0.0548	0.0598	43.8	47.8	1	10.0-159			8.73	37
2-Chlorotoluene	0.125	U	0.0650	0.0904	52.0	72.3	1	10.0-159			32.7	38
4-Chlorotoluene	0.125	U	0.0652	0.0863	52.2	69.0	1	10.0-155			27.9	39
1,2-Dibromo-3-Chloropropane	0.125	U	0.0868	0.111	69.4	88.8	1	10.0-151			24.5	39
1,2-Dibromoethane	0.125	U	0.0988	0.123	79.0	98.4	1	10.0-148			21.8	34
Dibromomethane	0.125	U	0.0969	0.104	77.5	83.2	1	10.0-147			7.07	35
1,2-Dichlorobenzene	0.125	U	0.0907	0.108	72.6	86.4	1	10.0-155			17.4	37
1,3-Dichlorobenzene	0.125	U	0.0779	0.0949	62.3	75.9	1	10.0-153			19.7	38
1,4-Dichlorobenzene	0.125	U	0.0802	0.0962	64.2	77.0	1	10.0-151			18.1	38
Dichlorodifluoromethane	0.125	U	0.0577	0.0646	46.2	51.7	1	10.0-160			11.3	35
1,1-Dichloroethane	0.125	U	0.0627	0.0785	50.2	62.8	1	10.0-147			22.4	37
1,2-Dichloroethane	0.125	U	0.0802	0.0930	64.2	74.4	1	10.0-148			14.8	35
1,1-Dichloroethene	0.125	U	0.0486	0.0123	38.9	9.84	1	10.0-155		J3 J6	119	37
cis-1,2-Dichloroethene	0.125	U	0.0667	0.0864	53.4	69.1	1	10.0-149			25.7	37
trans-1,2-Dichloroethene	0.125	U	0.0626	0.0758	50.1	60.6	1	10.0-150			19.1	37
1,2-Dichloropropane	0.125	0.0261	0.0812	0.0950	44.1	55.1	1	10.0-148			15.7	37
1,1-Dichloropropene	0.125	U	0.0582	0.0666	46.6	53.3	1	10.0-153			13.5	35
1,3-Dichloropropane	0.125	U	0.0914	0.117	73.1	93.6	1	10.0-154			24.6	35
cis-1,3-Dichloropropene	0.125	U	0.0821	0.103	65.7	82.4	1	10.0-151			22.6	37
trans-1,3-Dichloropropene	0.125	U	0.0872	0.110	69.8	88.0	1	10.0-148			23.1	37
2,2-Dichloropropane	0.125	U	0.0347	0.0456	27.8	36.5	1	10.0-138			27.1	36
Ethylbenzene	0.125	0.0112	0.116	0.126	83.8	91.8	1	10.0-160			8.26	38
Hexachloro-1,3-butadiene	0.125	U	0.0861	0.0837	68.9	67.0	1	10.0-160			2.83	40
2-Hexanone	0.625	U	0.570	0.652	91.2	104	1	10.0-160			13.4	36
Isopropylbenzene	0.125	0.000750	0.0715	0.0794	56.6	62.9	1	10.0-155			10.5	38
p-Isopropyltoluene	0.125	U	0.0638	0.0796	51.0	63.7	1	10.0-160			22.0	40
2-Butanone (MEK)	0.625	0.0680	0.513	0.565	71.2	79.5	1	10.0-160			9.65	40
Methylene Chloride	0.125	U	0.0216	0.0276	17.3	22.1	1	10.0-141			24.4	37
4-Methyl-2-pentanone (MIBK)	0.625	U	0.522	0.599	83.5	95.8	1	10.0-160			13.7	35
Methyl tert-butyl ether	0.125	U	0.0814	0.107	65.1	85.6	1	11.0-147			27.2	35
Naphthalene	0.125	U	0.105	0.128	84.0	102	1	10.0-160			19.7	36
n-Propylbenzene	0.125	0.00250	0.0688	0.0835	53.0	64.8	1	10.0-158			19.3	38
Styrene	0.125	0.000475	0.0837	0.0952	66.6	75.8	1	10.0-160			12.9	40
1,1,1,2-Tetrachloroethane	0.125	U	0.0758	0.0933	60.6	74.6	1	10.0-149			20.7	39
1,1,2,2-Tetrachloroethane	0.125	U	0.0789	0.116	63.1	92.8	1	10.0-160		J3	38.1	35
Tetrachloroethene	0.125	U	0.0627	0.0731	50.2	58.5	1	10.0-156			15.3	39

L1310897-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1310897-12 01/30/21 03:19 • (MS) R3617765-3 01/30/21 09:40 • (MSD) R3617765-4 01/30/21 09:59

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Toluene	0.125	0.0615	0.271	0.298	168	189	1	10.0-156	J5	J5	9.49	38
1,2,3-Trichlorobenzene	0.125	U	0.0902	0.126	72.2	101	1	10.0-160			33.1	40
1,2,4-Trichlorobenzene	0.125	U	0.0973	0.112	77.8	89.6	1	10.0-160			14.0	40
1,1,1-Trichloroethane	0.125	U	0.0589	0.0675	47.1	54.0	1	10.0-144			13.6	35
1,1,2-Trichloroethane	0.125	U	0.107	0.127	85.6	102	1	10.0-160			17.1	35
Trichloroethene	0.125	U	0.0749	0.0798	59.9	63.8	1	10.0-156			6.33	38
Trichlorofluoromethane	0.125	U	0.0166	0.0343	13.3	27.4	1	10.0-160		J3	69.5	40
1,2,3-Trichloropropane	0.125	U	0.0930	0.129	74.4	103	1	10.0-156			32.4	35
1,2,4-Trimethylbenzene	0.125	0.0137	0.139	0.132	100	94.6	1	10.0-160			5.17	36
1,3,5-Trimethylbenzene	0.125	0.00400	0.0801	0.0925	60.9	70.8	1	10.0-160			14.4	38
Vinyl chloride	0.125	U	0.0513	0.0591	41.0	47.3	1	10.0-160			14.1	37
Xylenes, Total	0.375	0.0488	0.437	0.447	104	106	1	10.0-160			2.26	38
(S) Toluene-d8					*96.2*	*103*		*75.0-131*				
(S) 4-Bromofluorobenzene					*108*	*99.6*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*92.6*	*91.7*		*70.0-130*				

L1311237-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311237-03 01/30/21 09:02 • (MS) R3617765-5 01/30/21 10:18 • (MSD) R3617765-6 01/30/21 10:37

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.725	U	0.372	0.419	51.3	57.8	1	10.0-160			11.9	40
Benzene	0.145	0.100	0.174	0.234	51.1	92.5	1	10.0-149			29.4	37
Bromobenzene	0.145	U	0.109	0.149	75.1	103	1	10.0-156			31.4	38
Bromodichloromethane	0.145	0.00107	0.0987	0.137	67.3	93.8	1	10.0-143			32.5	37
Bromochloromethane	0.145	U	0.108	0.149	74.7	103	1	10.0-155			31.8	33
Bromoform	0.145	U	0.129	0.143	89.2	98.7	1	10.0-146			10.1	36
Bromomethane	0.145	U	0.0517	0.0923	35.7	63.6	1	10.0-149		J3	56.4	38
n-Butylbenzene	0.145	U	0.0738	0.123	50.9	84.6	1	10.0-160		J3	49.8	40
sec-Butylbenzene	0.145	U	0.0822	0.141	56.7	97.6	1	10.0-159		J3	53.0	39
tert-Butylbenzene	0.145	U	0.0835	0.148	57.6	102	1	10.0-156		J3	55.7	39
Carbon disulfide	0.145	0.00121	0.0275	0.134	18.2	91.4	1	10.0-145		J3	132	39
Carbon tetrachloride	0.145	U	0.0587	0.149	40.5	103	1	10.0-145		J3	87.1	37
Chlorobenzene	0.145	U	0.0930	0.144	64.1	99.6	1	10.0-152		J3	43.3	39
Chlorodibromomethane	0.145	U	0.125	0.152	86.3	105	1	10.0-146			19.6	37
Chloroethane	0.145	U	0.0315	0.0671	21.7	46.3	1	10.0-146		J3	72.2	40
Chloroform	0.145	U	0.0847	0.145	58.4	99.9	1	10.0-146		J3	52.5	37
Chloromethane	0.145	U	0.0614	0.128	42.3	88.1	1	10.0-159		J3	70.2	37
2-Chlorotoluene	0.145	U	0.0917	0.145	63.2	100	1	10.0-159		J3	45.3	38

L1311237-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311237-03 01/30/21 09:02 • (MS) R3617765-5 01/30/21 10:18 • (MSD) R3617765-6 01/30/21 10:37

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
4-Chlorotoluene	0.145	U	0.0889	0.141	61.3	97.2	1	10.0-155		J3	45.3	39
1,2-Dibromo-3-Chloropropane	0.145	U	0.129	0.118	88.8	81.3	1	10.0-151			8.79	39
1,2-Dibromoethane	0.145	U	0.135	0.151	92.8	104	1	10.0-148			11.4	34
Dibromomethane	0.145	U	0.120	0.124	82.9	85.8	1	10.0-147			3.35	35
1,2-Dichlorobenzene	0.145	U	0.114	0.146	78.8	101	1	10.0-155			24.2	37
1,3-Dichlorobenzene	0.145	U	0.0990	0.136	68.3	93.8	1	10.0-153			31.5	38
1,4-Dichlorobenzene	0.145	U	0.101	0.137	70.0	94.3	1	10.0-151			29.6	38
Dichlorodifluoromethane	0.145	U	0.0721	0.163	49.7	112	1	10.0-160		J3	77.2	35
1,1-Dichloroethane	0.145	U	0.0779	0.140	53.7	96.5	1	10.0-147		J3	56.9	37
1,2-Dichloroethane	0.145	0.00121	0.0981	0.126	66.8	86.1	1	10.0-148			25.0	35
1,1-Dichloroethene	0.145	U	0.0119	0.157	8.20	108	1	10.0-155	J6	J3	172	37
cis-1,2-Dichloroethene	0.145	U	0.0877	0.141	60.5	97.3	1	10.0-149		J3	46.6	37
trans-1,2-Dichloroethene	0.145	U	0.0778	0.151	53.6	104	1	10.0-150		J3	63.9	37
1,2-Dichloropropane	0.145	0.0287	0.100	0.152	49.5	85.3	1	10.0-148		J3	41.0	37
1,1-Dichloropropene	0.145	U	0.0694	0.154	47.9	106	1	10.0-153		J3	75.6	35
1,3-Dichloropropane	0.145	U	0.124	0.148	85.7	102	1	10.0-154			17.4	35
cis-1,3-Dichloropropene	0.145	U	0.105	0.144	72.2	99.6	1	10.0-151			31.9	37
trans-1,3-Dichloropropene	0.145	U	0.118	0.148	81.2	102	1	10.0-148			22.7	37
2,2-Dichloropropane	0.145	U	0.0488	0.105	33.6	72.5	1	10.0-138		J3	73.3	36
Ethylbenzene	0.145	0.0116	0.0890	0.151	53.4	96.1	1	10.0-160		J3	51.5	38
Hexachloro-1,3-butadiene	0.145	U	0.0810	0.146	55.9	101	1	10.0-160		J3	57.3	40
2-Hexanone	0.725	U	0.740	0.726	102	100	1	10.0-160			1.80	36
Isopropylbenzene	0.145	0.00264	0.0798	0.141	53.2	95.5	1	10.0-155		J3	55.4	38
p-Isopropyltoluene	0.145	U	0.0798	0.136	55.1	93.7	1	10.0-160		J3	52.0	40
2-Butanone (MEK)	0.725	0.0959	0.568	0.606	65.2	70.4	1	10.0-160			6.48	40
Methylene Chloride	0.145	U	0.0272	0.0423	18.8	29.2	1	10.0-141		J3	43.4	37
4-Methyl-2-pentanone (MIBK)	0.725	0.00356	0.683	0.659	93.7	90.4	1	10.0-160			3.49	35
Methyl tert-butyl ether	0.145	U	0.122	0.144	84.1	99.5	1	11.0-147			16.7	35
Naphthalene	0.145	0.0158	0.148	0.146	91.1	90.1	1	10.0-160			0.995	36
n-Propylbenzene	0.145	0.0107	0.0800	0.141	47.8	89.9	1	10.0-158		J3	55.3	38
Styrene	0.145	U	0.0951	0.140	65.6	96.4	1	10.0-160			38.1	40
1,1,1,2-Tetrachloroethane	0.145	U	0.103	0.138	70.9	95.1	1	10.0-149			29.1	39
1,1,2,2-Tetrachloroethane	0.145	U	0.134	0.139	92.6	96.1	1	10.0-160			3.64	35
Tetrachloroethene	0.145	U	0.0763	0.154	52.6	106	1	10.0-156		J3	67.3	39
Toluene	0.145	0.0319	0.105	0.167	50.3	93.1	1	10.0-156		J3	45.7	38
1,2,3-Trichlorobenzene	0.145	U	0.139	0.167	96.0	115	1	10.0-160			18.2	40
1,2,4-Trichlorobenzene	0.145	U	0.125	0.161	86.1	111	1	10.0-160			25.4	40
1,1,1-Trichloroethane	0.145	U	0.0722	0.164	49.8	113	1	10.0-144		J3	77.7	35
1,1,2-Trichloroethane	0.145	0.00110	0.137	0.163	93.6	111	1	10.0-160			17.2	35

L1311237-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311237-03 01/30/21 09:02 • (MS) R3617765-5 01/30/21 10:18 • (MSD) R3617765-6 01/30/21 10:37

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Trichloroethene	0.145	U	0.0835	0.155	57.6	107	1	10.0-156		J3	60.1	38
Trichlorofluoromethane	0.145	0.00190	0.0407	0.0930	26.8	62.8	1	10.0-160		J3	78.2	40
1,2,3-Trichloropropane	0.145	U	0.151	0.155	104	107	1	10.0-156			2.87	35
1,2,4-Trimethylbenzene	0.145	0.0612	0.0908	0.141	20.4	54.7	1	10.0-160		J3	43.0	36
1,3,5-Trimethylbenzene	0.145	0.0186	0.0863	0.141	46.7	84.5	1	10.0-160		J3	48.3	38
Vinyl chloride	0.145	U	0.0618	0.138	42.6	95.4	1	10.0-160		J3	76.4	37
Xylenes, Total	0.435	0.0460	0.278	0.445	53.4	91.8	1	10.0-160		J3	46.2	38
(S) Toluene-d8					*102*	*102*		*75.0-131*				
(S) 4-Bromofluorobenzene					*99.4*	*96.8*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*93.6*	*92.3*		*70.0-130*				

Method Blank (MB)

(MB) R3618950-3 01/30/21 17:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromochloromethane	U		0.000564	0.00500
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon disulfide	U		0.000700	0.0125
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
2-Hexanone	U		0.00336	0.0250

Method Blank (MB)

(MB) R3618950-3 01/30/21 17:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Isopropylbenzene	U		0.000425	0.00250
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*99.8*			*75.0-131*
(S) 4-Bromofluorobenzene	*99.1*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.6*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618950-1 01/30/21 16:02 • (LCSD) R3618950-2 01/30/21 16:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	1.47	1.43	235	229	10.0-160	J4	J4	2.76	31
Benzene	0.125	0.132	0.127	106	102	70.0-123			3.86	20
Bromobenzene	0.125	0.111	0.111	88.8	88.8	73.0-121			0.000	20
Bromodichloromethane	0.125	0.117	0.118	93.6	94.4	73.0-121			0.851	20
Bromochloromethane	0.125	0.165	0.159	132	127	77.0-128	J4		3.70	20
Bromoform	0.125	0.116	0.120	92.8	96.0	64.0-132			3.39	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618950-1 01/30/21 16:02 • (LCSD) R3618950-2 01/30/21 16:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromomethane	0.125	0.118	0.122	94.4	97.6	56.0-147			3.33	20
n-Butylbenzene	0.125	0.0902	0.0909	72.2	72.7	68.0-135			0.773	20
sec-Butylbenzene	0.125	0.100	0.102	80.0	81.6	74.0-130			1.98	20
tert-Butylbenzene	0.125	0.107	0.110	85.6	88.0	75.0-127			2.76	20
Carbon disulfide	0.125	0.150	0.143	120	114	56.0-133			4.78	20
Carbon tetrachloride	0.125	0.111	0.108	88.8	86.4	66.0-128			2.74	20
Chlorobenzene	0.125	0.120	0.120	96.0	96.0	76.0-128			0.000	20
Chlorodibromomethane	0.125	0.114	0.117	91.2	93.6	74.0-127			2.60	20
Chloroethane	0.125	0.140	0.133	112	106	61.0-134			5.13	20
Chloroform	0.125	0.135	0.134	108	107	72.0-123			0.743	20
Chloromethane	0.125	0.128	0.127	102	102	51.0-138			0.784	20
2-Chlorotoluene	0.125	0.0978	0.110	78.2	88.0	75.0-124			11.7	20
4-Chlorotoluene	0.125	0.110	0.110	88.0	88.0	75.0-124			0.000	20
1,2-Dibromo-3-Chloropropane	0.125	0.112	0.112	89.6	89.6	59.0-130			0.000	20
1,2-Dibromoethane	0.125	0.111	0.109	88.8	87.2	74.0-128			1.82	20
Dibromomethane	0.125	0.141	0.135	113	108	75.0-122			4.35	20
1,2-Dichlorobenzene	0.125	0.103	0.104	82.4	83.2	76.0-124			0.966	20
1,3-Dichlorobenzene	0.125	0.108	0.108	86.4	86.4	76.0-125			0.000	20
1,4-Dichlorobenzene	0.125	0.113	0.114	90.4	91.2	77.0-121			0.881	20
Dichlorodifluoromethane	0.125	0.0934	0.0869	74.7	69.5	43.0-156			7.21	20
1,1-Dichloroethane	0.125	0.129	0.126	103	101	70.0-127			2.35	20
1,2-Dichloroethane	0.125	0.120	0.129	96.0	103	65.0-131			7.23	20
1,1-Dichloroethene	0.125	0.140	0.135	112	108	65.0-131			3.64	20
cis-1,2-Dichloroethene	0.125	0.145	0.141	116	113	73.0-125			2.80	20
trans-1,2-Dichloroethene	0.125	0.144	0.140	115	112	71.0-125			2.82	20
1,2-Dichloropropane	0.125	0.141	0.141	113	113	74.0-125			0.000	20
1,1-Dichloropropene	0.125	0.131	0.132	105	106	73.0-125			0.760	20
1,3-Dichloropropane	0.125	0.107	0.110	85.6	88.0	80.0-125			2.76	20
cis-1,3-Dichloropropene	0.125	0.124	0.127	99.2	102	76.0-127			2.39	20
trans-1,3-Dichloropropene	0.125	0.106	0.108	84.8	86.4	73.0-127			1.87	20
2,2-Dichloropropane	0.125	0.155	0.153	124	122	59.0-135			1.30	20
Ethylbenzene	0.125	0.117	0.118	93.6	94.4	74.0-126			0.851	20
Hexachloro-1,3-butadiene	0.125	0.0809	0.0853	64.7	68.2	57.0-150			5.29	20
2-Hexanone	0.625	0.615	0.636	98.4	102	54.0-147			3.36	20
Isopropylbenzene	0.125	0.123	0.121	98.4	96.8	72.0-127			1.64	20
p-Isopropyltoluene	0.125	0.0970	0.0980	77.6	78.4	72.0-133			1.03	20
2-Butanone (MEK)	0.625	0.854	0.865	137	138	30.0-160			1.28	24
Methylene Chloride	0.125	0.153	0.151	122	121	68.0-123			1.32	20
4-Methyl-2-pentanone (MIBK)	0.625	0.624	0.636	99.8	102	56.0-143			1.90	20
Methyl tert-butyl ether	0.125	0.153	0.155	122	124	66.0-132			1.30	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618950-1 01/30/21 16:02 • (LCSD) R3618950-2 01/30/21 16:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.101	0.104	80.8	83.2	59.0-130			2.93	20
n-Propylbenzene	0.125	0.110	0.108	88.0	86.4	74.0-126			1.83	20
Styrene	0.125	0.117	0.119	93.6	95.2	72.0-127			1.69	20
1,1,1,2-Tetrachloroethane	0.125	0.115	0.110	92.0	88.0	74.0-129			4.44	20
1,1,2,2-Tetrachloroethane	0.125	0.109	0.108	87.2	86.4	68.0-128			0.922	20
Tetrachloroethene	0.125	0.128	0.130	102	104	70.0-136			1.55	20
Toluene	0.125	0.116	0.118	92.8	94.4	75.0-121			1.71	20
1,2,3-Trichlorobenzene	0.125	0.0814	0.0848	65.1	67.8	59.0-139			4.09	20
1,2,4-Trichlorobenzene	0.125	0.0832	0.0873	66.6	69.8	62.0-137			4.81	20
1,1,1-Trichloroethane	0.125	0.127	0.124	102	99.2	69.0-126			2.39	20
1,1,2-Trichloroethane	0.125	0.115	0.117	92.0	93.6	78.0-123			1.72	20
Trichloroethene	0.125	0.141	0.135	113	108	76.0-126			4.35	20
Trichlorofluoromethane	0.125	0.0958	0.100	76.6	80.0	61.0-142			4.29	20
1,2,3-Trichloropropane	0.125	0.115	0.116	92.0	92.8	67.0-129			0.866	20
1,2,4-Trimethylbenzene	0.125	0.111	0.111	88.8	88.8	70.0-126			0.000	20
1,3,5-Trimethylbenzene	0.125	0.111	0.111	88.8	88.8	73.0-127			0.000	20
Vinyl chloride	0.125	0.123	0.134	98.4	107	63.0-134			8.56	20
Xylenes, Total	0.375	0.351	0.352	93.6	93.9	72.0-127			0.284	20
(S) Toluene-d8				*96.6*	*96.1*	*75.0-131*				
(S) 4-Bromofluorobenzene				*100*	*100*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*96.0*	*96.0*	*70.0-130*				

Method Blank (MB)

(MB) R3619277-2 02/03/21 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*85.5*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3619277-1 02/03/21 11:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.621	99.4	10.0-160	
(S) Toluene-d8			*104*	*75.0-131*	
(S) 4-Bromofluorobenzene			*99.7*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*95.9*	*70.0-130*	

Method Blank (MB)

(MB) R3618888-1 02/02/21 19:23

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH C6 - C12	U		15.0	50.0
TPH C12 - C28	U		15.0	50.0
TPH C28 - C35	U		15.0	50.0
TPH C6 - C35	U		15.0	50.0
(S) o-Terphenyl	*116*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3618888-2 02/02/21 19:38 • (LCSD) R3618888-3 02/02/21 19:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH C6 - C12	245	232	220	94.7	93.6	75.0-125			5.31	20
TPH C12 - C28	245	213	201	86.9	85.5	75.0-125			5.80	20
TPH C6 - C35	490	445	421	90.8	89.6	75.0-125			5.54	20
(S) o-Terphenyl				*110*	*110*	*70.0-130*				

Method Blank (MB)

(MB) R3619187-1 02/03/21 15:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH C6 - C12	U		15.0	50.0
TPH C12 - C28	U		15.0	50.0
TPH C28 - C35	U		15.0	50.0
TPH C6 - C35	U		15.0	50.0
(S) o-Terphenyl	*80.4*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3619187-2 02/03/21 15:45 • (LCSD) R3619187-3 02/03/21 16:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH C6 - C12	250	246	242	98.4	96.8	75.0-125			1.64	20
TPH C12 - C28	250	236	230	94.4	92.0	75.0-125			2.58	20
TPH C6 - C35	500	482	472	96.4	94.4	75.0-125			2.10	20
(S) o-Terphenyl				*82.8*	*81.2*	*70.0-130*				

L1311289-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311289-03 02/03/21 16:31 • (MS) R3619187-4 02/03/21 16:47 • (MSD) R3619187-5 02/03/21 17:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH C6 - C12	306	U	297	312	97.2	98.8	1	75.0-125			4.82	20
TPH C12 - C28	306	U	289	302	94.4	95.7	1	75.0-125			4.55	20
TPH C6 - C35	612	U	586	614	95.8	97.5	1	75.0-125			4.69	20
(S) o-Terphenyl					*81.2*	*82.9*		*70.0-130*				

Method Blank (MB)

(MB) R3618550-2 02/01/21 14:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-Oxybis(1-Chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
Carbazole	U		0.0103	0.333
4-Chloroaniline	U		0.0120	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
Dibenzofuran	U		0.0109	0.333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
2-Methylnaphthalene	U		0.00432	0.0333
Naphthalene	U		0.00836	0.0333
2-Nitroaniline	U		0.0107	0.333
3-Nitroaniline	U		0.0106	0.333
4-Nitroaniline	U		0.00971	0.333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333

Method Blank (MB)

(MB) R3618550-2 02/01/21 14:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
Benzoic Acid	U		0.118	1.67
Benzyl Alcohol	U		0.0123	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
(S) Nitrobenzene-d5	*49.8*			*10.0-122*
(S) 2-Fluorobiphenyl	*53.8*			*15.0-120*
(S) p-Terphenyl-d14	*70.9*			*10.0-120*
(S) Phenol-d5	*52.0*			*10.0-120*
(S) 2-Fluorophenol	*56.3*			*12.0-120*
(S) 2,4,6-Tribromophenol	*51.5*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3618550-1 02/01/21 13:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.371	55.7	38.0-120	
Acenaphthylene	0.666	0.367	55.1	40.0-120	

Laboratory Control Sample (LCS)

(LCS) R3618550-1 02/01/21 13:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.666	0.375	56.3	42.0-120	
Benzo(a)anthracene	0.666	0.446	67.0	44.0-120	
Benzo(b)fluoranthene	0.666	0.438	65.8	43.0-120	
Benzo(k)fluoranthene	0.666	0.447	67.1	44.0-120	
Benzo(g,h,i)perylene	0.666	0.422	63.4	43.0-120	
Benzo(a)pyrene	0.666	0.468	70.3	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.323	48.5	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.410	61.6	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.354	53.2	23.0-120	
4-Bromophenyl-phenylether	0.666	0.370	55.6	40.0-120	
Carbazole	0.666	0.390	58.6	48.0-120	
4-Chloroaniline	0.666	0.319	47.9	18.0-120	
2-Chloronaphthalene	0.666	0.363	54.5	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.376	56.5	40.0-120	
Chrysene	0.666	0.437	65.6	43.0-120	
Dibenz(a,h)anthracene	0.666	0.408	61.3	44.0-120	
Dibenzofuran	0.666	0.391	58.7	44.0-120	
3,3-Dichlorobenzidine	1.33	0.721	54.2	28.0-120	
2,4-Dinitrotoluene	0.666	0.412	61.9	45.0-120	
2,6-Dinitrotoluene	0.666	0.405	60.8	42.0-120	
Fluoranthene	0.666	0.387	58.1	44.0-120	
Fluorene	0.666	0.381	57.2	41.0-120	
Hexachlorobenzene	0.666	0.373	56.0	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.309	46.4	15.0-120	
Hexachlorocyclopentadiene	0.666	0.347	52.1	15.0-120	
Hexachloroethane	0.666	0.344	51.7	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.417	62.6	45.0-120	
Isophorone	0.666	0.326	48.9	23.0-120	
2-Methylnaphthalene	0.666	0.303	45.5	34.0-120	
Naphthalene	0.666	0.315	47.3	18.0-120	
2-Nitroaniline	0.666	0.449	67.4	46.0-120	
3-Nitroaniline	0.666	0.389	58.4	36.0-120	
4-Nitroaniline	0.666	0.461	69.2	36.0-120	
Nitrobenzene	0.666	0.337	50.6	17.0-120	
n-Nitrosodimethylamine	0.666	0.437	65.6	10.0-125	
n-Nitrosodiphenylamine	0.666	0.381	57.2	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.379	56.9	26.0-120	
Phenanthrene	0.666	0.387	58.1	42.0-120	
Benzylbutyl phthalate	0.666	0.437	65.6	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.432	64.9	41.0-120	

Laboratory Control Sample (LCS)

(LCS) R3618550-1 02/01/21 13:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Di-n-butyl phthalate	0.666	0.386	58.0	43.0-120	
Diethyl phthalate	0.666	0.395	59.3	43.0-120	
Dimethyl phthalate	0.666	0.411	61.7	43.0-120	
Di-n-octyl phthalate	0.666	0.422	63.4	40.0-120	
Pyrene	0.666	0.430	64.6	41.0-120	
Pyridine	0.666	0.219	32.9	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.321	48.2	17.0-120	
Benzoic Acid	1.33	0.329	24.7	10.0-120	
Benzyl Alcohol	0.666	0.362	54.4	10.0-120	
4-Chloro-3-methylphenol	0.666	0.335	50.3	28.0-120	
2-Chlorophenol	0.666	0.376	56.5	28.0-120	
2-Methylphenol	0.666	0.370	55.6	35.0-120	
3&4-Methyl Phenol	0.666	0.426	64.0	42.0-120	
2,4-Dichlorophenol	0.666	0.331	49.7	25.0-120	
2,4-Dimethylphenol	0.666	0.353	53.0	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.414	62.2	16.0-120	
2,4-Dinitrophenol	0.666	0.277	41.6	10.0-120	
2-Nitrophenol	0.666	0.332	49.8	20.0-120	
4-Nitrophenol	0.666	0.392	58.9	27.0-120	
Pentachlorophenol	0.666	0.358	53.8	29.0-120	
Phenol	0.666	0.369	55.4	28.0-120	
2,4,5-Trichlorophenol	0.666	0.355	53.3	38.0-120	
2,4,6-Trichlorophenol	0.666	0.378	56.8	37.0-120	
(S) Nitrobenzene-d5			*53.5*	*10.0-122*	
(S) 2-Fluorobiphenyl			*57.1*	*15.0-120*	
(S) p-Terphenyl-d14			*68.8*	*10.0-120*	
(S) Phenol-d5			*56.5*	*10.0-120*	
(S) 2-Fluorophenol			*62.9*	*12.0-120*	
(S) 2,4,6-Tribromophenol			*59.9*	*10.0-127*	

L1311037-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311037-05 02/01/21 17:02 • (MS) R3618550-3 02/01/21 17:26 • (MSD) R3618550-4 02/01/21 17:50

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.823	U	0.426	0.445	51.8	54.4	1	18.0-120			4.26	32
Acenaphthylene	0.823	U	0.429	0.439	52.1	53.6	1	25.0-120			2.28	32
Anthracene	0.823	U	0.445	0.455	54.1	55.6	1	22.0-120			2.20	29
Benzo(a)anthracene	0.823	0.0104	0.498	0.546	59.2	65.5	1	25.0-120			9.23	29

L1311037-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311037-05 02/01/21 17:02 • (MS) R3618550-3 02/01/21 17:26 • (MSD) R3618550-4 02/01/21 17:50

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzo(b)fluoranthene	0.823	U	0.503	0.540	61.1	66.0	1	19.0-122			7.11	31
Benzo(k)fluoranthene	0.823	U	0.512	0.525	62.2	64.2	1	23.0-120			2.62	30
Benzo(g,h,i)perylene	0.823	U	0.447	0.472	54.4	57.7	1	10.0-120			5.38	33
Benzo(a)pyrene	0.823	U	0.528	0.562	64.1	68.7	1	24.0-120			6.35	30
Bis(2-chlorethoxy)methane	0.823	U	0.386	0.379	46.8	46.4	1	10.0-120			1.62	34
Bis(2-chloroethyl)ether	0.823	U	0.508	0.531	61.7	65.0	1	10.0-120			4.52	40
2,2-Oxybis(1-Chloropropane)	0.823	U	0.436	0.420	53.0	51.4	1	10.0-120			3.75	40
4-Bromophenyl-phenylether	0.823	U	0.461	0.470	56.0	57.4	1	27.0-120			1.86	30
2-Chloronaphthalene	0.823	U	0.435	0.441	52.9	53.9	1	20.0-120			1.41	32
4-Chlorophenyl-phenylether	0.823	U	0.467	0.466	56.8	56.9	1	24.0-120			0.265	29
Chrysene	0.823	0.0114	0.484	0.542	57.5	64.9	1	21.0-120			11.3	29
Dibenz(a,h)anthracene	0.823	U	0.453	0.466	55.1	56.9	1	10.0-120			2.69	32
3,3-Dichlorobenzidine	1.64	U	0.572	0.620	34.8	38.0	1	10.0-120			8.08	34
Carbazole	0.823	U	0.444	0.466	53.9	56.9	1	31.0-120			4.89	24
2,4-Dinitrotoluene	0.823	U	0.486	0.516	59.0	63.1	1	30.0-120			6.17	31
4-Chloroaniline	0.823	U	0.340	0.334	41.3	40.8	1	10.0-120			1.83	36
2,6-Dinitrotoluene	0.823	U	0.463	0.470	56.3	57.4	1	25.0-120			1.32	31
Fluoranthene	0.823	0.0167	0.468	0.507	54.9	59.9	1	18.0-126			7.86	32
Fluorene	0.823	U	0.450	0.460	54.7	56.2	1	25.0-120			2.17	30
Hexachlorobenzene	0.823	U	0.446	0.458	54.2	56.0	1	27.0-120			2.73	28
Dibenzofuran	0.823	U	0.466	0.474	56.6	58.0	1	24.0-120			1.84	30
Hexachloro-1,3-butadiene	0.823	U	0.366	0.358	44.4	43.8	1	10.0-120			2.05	38
Hexachlorocyclopentadiene	0.823	U	0.399	0.407	48.5	49.7	1	10.0-120			1.84	40
Hexachloroethane	0.823	U	0.404	0.397	49.1	48.5	1	10.0-120			1.85	40
Indeno(1,2,3-cd)pyrene	0.823	U	0.466	0.489	56.6	59.8	1	10.0-120			4.92	32
Isophorone	0.823	U	0.382	0.372	46.4	45.5	1	13.0-120			2.62	34
Naphthalene	0.823	U	0.376	0.362	45.6	44.3	1	10.0-120			3.69	35
Nitrobenzene	0.823	U	0.398	0.378	48.3	46.2	1	10.0-120			5.10	36
n-Nitrosodimethylamine	0.823	U	0.535	0.474	65.0	58.0	1	10.0-127			12.0	40
n-Nitrosodiphenylamine	0.823	U	0.436	0.450	53.0	55.0	1	17.0-120			3.07	29
n-Nitrosodi-n-propylamine	0.823	U	0.440	0.424	53.5	51.8	1	10.0-120			3.72	37
Phenanthrene	0.823	0.0102	0.453	0.491	53.9	58.7	1	17.0-120			7.85	31
2-Methylnaphthalene	0.823	0.00542	0.374	0.363	44.8	43.7	1	10.0-120			3.02	37
Benzylbutyl phthalate	0.823	U	0.355	0.461	43.1	56.3	1	23.0-120			26.1	30
Bis(2-ethylhexyl)phthalate	0.823	U	0.468	0.516	56.9	63.1	1	17.0-126			9.79	30
2-Nitroaniline	0.823	U	0.523	0.538	63.5	65.7	1	24.0-120			2.80	30
Di-n-butyl phthalate	0.823	U	0.445	0.465	54.1	56.8	1	30.0-120			4.35	29
3-Nitroaniline	0.823	U	0.431	0.415	52.4	50.8	1	11.0-120			3.80	32
Diethyl phthalate	0.823	U	0.468	0.468	56.9	57.3	1	26.0-120			0.000	28

1 Cp
2 Tc
3 Ss
4 Cn
5 Tr
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

L1311037-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311037-05 02/01/21 17:02 • (MS) R3618550-3 02/01/21 17:26 • (MSD) R3618550-4 02/01/21 17:50

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
4-Nitroaniline	0.823	U	0.461	0.458	56.0	56.0	1	15.0-120			0.538	31
Dimethyl phthalate	0.823	U	0.457	0.478	55.6	58.5	1	25.0-120			4.49	29
Di-n-octyl phthalate	0.823	U	0.478	0.518	58.1	63.3	1	21.0-123			7.94	29
Pyrene	0.823	0.0174	0.487	0.559	57.0	66.1	1	16.0-121			13.7	32
1,2,4-Trichlorobenzene	0.823	U	0.390	0.379	47.4	46.4	1	12.0-120			2.89	37
4-Chloro-3-methylphenol	0.823	U	0.394	0.399	47.9	48.8	1	15.0-120			1.25	30
2-Chlorophenol	0.823	U	0.449	0.439	54.5	53.6	1	15.0-120			2.23	37
2,4-Dichlorophenol	0.823	U	0.405	0.403	49.2	49.2	1	20.0-120			0.612	31
2,4-Dimethylphenol	0.823	U	0.388	0.386	47.1	47.1	1	10.0-120			0.639	33
4,6-Dinitro-2-methylphenol	0.823	U	0.441	0.497	53.6	60.7	1	10.0-120			11.9	39
Pyridine	0.823	U	0.208	0.0297	25.2	3.63	1	10.0-120		J3 J6	150	40
2,4-Dinitrophenol	0.823	U	0.330	0.405	40.1	49.5	1	10.0-121			20.5	40
2-Nitrophenol	0.823	U	0.393	0.403	47.7	49.2	1	12.0-120			2.48	39
Benzoic Acid	1.64	U	0.337	0.226	20.5	13.9	1	10.0-152			39.5	40
4-Nitrophenol	0.823	U	0.424	0.466	51.5	56.9	1	10.0-137			9.44	32
Benzyl Alcohol	0.823	U	0.420	0.386	51.1	47.1	1	10.0-136			8.59	40
Pentachlorophenol	0.823	U	0.510	0.518	62.0	63.3	1	10.0-160			1.44	31
Phenol	0.823	U	0.440	0.437	53.5	53.5	1	12.0-120			0.563	38
2-Methylphenol	0.823	U	0.453	0.452	55.1	55.3	1	11.0-120			0.273	40
3&4-Methyl Phenol	0.823	U	0.483	0.497	58.7	60.7	1	12.0-123			2.77	38
2,4,6-Trichlorophenol	0.823	U	0.440	0.449	53.5	54.8	1	19.0-120			1.95	32
2,4,5-Trichlorophenol	0.823	U	0.449	0.458	54.5	56.0	1	20.0-120			2.18	30
(S) Nitrobenzene-d5					*50.2*	*50.5*		*10.0-122*				
(S) 2-Fluorobiphenyl					*54.1*	*52.3*		*15.0-120*				
(S) p-Terphenyl-d14					*62.2*	*55.9*		*10.0-120*				
(S) Phenol-d5					*52.7*	*52.4*		*10.0-120*				
(S) 2-Fluorophenol					*59.0*	*56.8*		*12.0-120*				
(S) 2,4,6-Tribromophenol					*56.2*	*57.6*		*10.0-127*				

Method Blank (MB)

(MB) R3618953-2 02/02/21 19:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
Carbazole	U		0.0103	0.333
4-Chloroaniline	U		0.0120	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
Dibenzofuran	U		0.0109	0.333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
2-Methylnaphthalene	U		0.00432	0.0333
Naphthalene	U		0.00836	0.0333
2-Nitroaniline	U		0.0107	0.333
3-Nitroaniline	U		0.0106	0.333
4-Nitroaniline	U		0.00971	0.333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333

Method Blank (MB)

(MB) R3618953-2 02/02/21 19:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
Benzoic Acid	U		0.118	1.67
Benzyl Alcohol	U		0.0123	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
(S) Nitrobenzene-d5	*64.3*			*10.0-122*
(S) 2-Fluorobiphenyl	*73.0*			*15.0-120*
(S) p-Terphenyl-d14	*79.9*			*10.0-120*
(S) Phenol-d5	*71.5*			*10.0-120*
(S) 2-Fluorophenol	*76.3*			*12.0-120*
(S) 2,4,6-Tribromophenol	*59.8*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3618953-1 02/02/21 18:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.463	69.5	38.0-120	
Acenaphthylene	0.666	0.489	73.4	40.0-120	

Laboratory Control Sample (LCS)

(LCS) R3618953-1 02/02/21 18:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.666	0.463	69.5	42.0-120	
Benzo(a)anthracene	0.666	0.524	78.7	44.0-120	
Benzo(b)fluoranthene	0.666	0.509	76.4	43.0-120	
Benzo(k)fluoranthene	0.666	0.540	81.1	44.0-120	
Benzo(g,h,i)perylene	0.666	0.499	74.9	43.0-120	
Benzo(a)pyrene	0.666	0.544	81.7	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.416	62.5	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.579	86.9	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.464	69.7	23.0-120	
4-Bromophenyl-phenylether	0.666	0.456	68.5	40.0-120	
Carbazole	0.666	0.484	72.7	48.0-120	
4-Chloroaniline	0.666	0.376	56.5	18.0-120	
2-Chloronaphthalene	0.666	0.466	70.0	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.485	72.8	40.0-120	
Chrysene	0.666	0.513	77.0	43.0-120	
Dibenz(a,h)anthracene	0.666	0.496	74.5	44.0-120	
Dibenzofuran	0.666	0.489	73.4	44.0-120	
3,3-Dichlorobenzidine	1.33	0.906	68.1	28.0-120	
2,4-Dinitrotoluene	0.666	0.509	76.4	45.0-120	
2,6-Dinitrotoluene	0.666	0.494	74.2	42.0-120	
Fluoranthene	0.666	0.473	71.0	44.0-120	
Fluorene	0.666	0.493	74.0	41.0-120	
Hexachlorobenzene	0.666	0.449	67.4	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.373	56.0	15.0-120	
Hexachlorocyclopentadiene	0.666	0.415	62.3	15.0-120	
Hexachloroethane	0.666	0.456	68.5	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.482	72.4	45.0-120	
Isophorone	0.666	0.398	59.8	23.0-120	
2-Methylnaphthalene	0.666	0.386	58.0	34.0-120	
Naphthalene	0.666	0.397	59.6	18.0-120	
2-Nitroaniline	0.666	0.571	85.7	46.0-120	
3-Nitroaniline	0.666	0.520	78.1	36.0-120	
4-Nitroaniline	0.666	0.637	95.6	36.0-120	
Nitrobenzene	0.666	0.396	59.5	17.0-120	
n-Nitrosodimethylamine	0.666	0.463	69.5	10.0-125	
n-Nitrosodiphenylamine	0.666	0.479	71.9	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.471	70.7	26.0-120	
Phenanthrene	0.666	0.478	71.8	42.0-120	
Benzylbutyl phthalate	0.666	0.528	79.3	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.519	77.9	41.0-120	

Laboratory Control Sample (LCS)

(LCS) R3618953-1 02/02/21 18:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Di-n-butyl phthalate	0.666	0.478	71.8	43.0-120	
Diethyl phthalate	0.666	0.491	73.7	43.0-120	
Dimethyl phthalate	0.666	0.488	73.3	43.0-120	
Di-n-octyl phthalate	0.666	0.495	74.3	40.0-120	
Pyrene	0.666	0.542	81.4	41.0-120	
Pyridine	0.666	0.301	45.2	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.387	58.1	17.0-120	
Benzoic Acid	1.33	0.608	45.7	10.0-120	
Benzyl Alcohol	0.666	0.457	68.6	10.0-120	
4-Chloro-3-methylphenol	0.666	0.433	65.0	28.0-120	
2-Chlorophenol	0.666	0.497	74.6	28.0-120	
2-Methylphenol	0.666	0.505	75.8	35.0-120	
3&4-Methyl Phenol	0.666	0.565	84.8	42.0-120	
2,4-Dichlorophenol	0.666	0.420	63.1	25.0-120	
2,4-Dimethylphenol	0.666	0.431	64.7	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.503	75.5	16.0-120	
2,4-Dinitrophenol	0.666	0.430	64.6	10.0-120	
2-Nitrophenol	0.666	0.420	63.1	20.0-120	
4-Nitrophenol	0.666	0.529	79.4	27.0-120	
Pentachlorophenol	0.666	0.499	74.9	29.0-120	
Phenol	0.666	0.490	73.6	28.0-120	
2,4,5-Trichlorophenol	0.666	0.510	76.6	38.0-120	
2,4,6-Trichlorophenol	0.666	0.494	74.2	37.0-120	
(S) Nitrobenzene-d5			*62.5*	*10.0-122*	
(S) 2-Fluorobiphenyl			*71.2*	*15.0-120*	
(S) p-Terphenyl-d14			*76.0*	*10.0-120*	
(S) Phenol-d5			*73.6*	*10.0-120*	
(S) 2-Fluorophenol			*77.8*	*12.0-120*	
(S) 2,4,6-Tribromophenol			*67.9*	*10.0-127*	

Method Blank (MB)

(MB) R3619962-2 02/05/21 11:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
Carbazole	U		0.0103	0.333
4-Chloroaniline	U		0.0120	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
Dibenzofuran	U		0.0109	0.333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
2-Methylnaphthalene	U		0.00432	0.0333
Naphthalene	U		0.00836	0.0333
2-Nitroaniline	U		0.0107	0.333
3-Nitroaniline	U		0.0106	0.333
4-Nitroaniline	U		0.00971	0.333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333

Method Blank (MB)

(MB) R3619962-2 02/05/21 11:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
Benzoic Acid	U		0.118	1.67
Benzyl Alcohol	U		0.0123	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
(S) Nitrobenzene-d5	*68.5*			*10.0-122*
(S) 2-Fluorobiphenyl	*76.6*			*15.0-120*
(S) p-Terphenyl-d14	*89.5*			*10.0-120*
(S) Phenol-d5	*70.6*			*10.0-120*
(S) 2-Fluorophenol	*75.1*			*12.0-120*
(S) 2,4,6-Tribromophenol	*71.0*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3619962-1 02/05/21 10:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.502	75.4	38.0-120	
Acenaphthylene	0.666	0.505	75.8	40.0-120	

Laboratory Control Sample (LCS)

(LCS) R3619962-1 02/05/21 10:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.666	0.492	73.9	42.0-120	
Benzo(a)anthracene	0.666	0.567	85.1	44.0-120	
Benzo(b)fluoranthene	0.666	0.560	84.1	43.0-120	
Benzo(k)fluoranthene	0.666	0.571	85.7	44.0-120	
Benzo(g,h,i)perylene	0.666	0.562	84.4	43.0-120	
Benzo(a)pyrene	0.666	0.601	90.2	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.391	58.7	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.470	70.6	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.456	68.5	23.0-120	
4-Bromophenyl-phenylether	0.666	0.509	76.4	40.0-120	
Carbazole	0.666	0.505	75.8	48.0-120	
4-Chloroaniline	0.666	0.321	48.2	18.0-120	
2-Chloronaphthalene	0.666	0.500	75.1	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.545	81.8	40.0-120	
Chrysene	0.666	0.545	81.8	43.0-120	
Dibenz(a,h)anthracene	0.666	0.558	83.8	44.0-120	
Dibenzofuran	0.666	0.543	81.5	44.0-120	
3,3-Dichlorobenzidine	1.33	0.807	60.7	28.0-120	
2,4-Dinitrotoluene	0.666	0.587	88.1	45.0-120	
2,6-Dinitrotoluene	0.666	0.550	82.6	42.0-120	
Fluoranthene	0.666	0.514	77.2	44.0-120	
Fluorene	0.666	0.520	78.1	41.0-120	
Hexachlorobenzene	0.666	0.507	76.1	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.387	58.1	15.0-120	
Hexachlorocyclopentadiene	0.666	0.479	71.9	15.0-120	
Hexachloroethane	0.666	0.455	68.3	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.557	83.6	45.0-120	
Isophorone	0.666	0.401	60.2	23.0-120	
2-Methylnaphthalene	0.666	0.382	57.4	34.0-120	
Naphthalene	0.666	0.380	57.1	18.0-120	
2-Nitroaniline	0.666	0.606	91.0	46.0-120	
3-Nitroaniline	0.666	0.474	71.2	36.0-120	
4-Nitroaniline	0.666	0.608	91.3	36.0-120	
Nitrobenzene	0.666	0.407	61.1	17.0-120	
n-Nitrosodimethylamine	0.666	0.514	77.2	10.0-125	
n-Nitrosodiphenylamine	0.666	0.499	74.9	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.479	71.9	26.0-120	
Phenanthrene	0.666	0.506	76.0	42.0-120	
Benzylbutyl phthalate	0.666	0.547	82.1	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.548	82.3	41.0-120	

Laboratory Control Sample (LCS)

(LCS) R3619962-1 02/05/21 10:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Di-n-butyl phthalate	0.666	0.504	75.7	43.0-120	
Diethyl phthalate	0.666	0.549	82.4	43.0-120	
Dimethyl phthalate	0.666	0.532	79.9	43.0-120	
Di-n-octyl phthalate	0.666	0.559	83.9	40.0-120	
Pyrene	0.666	0.545	81.8	41.0-120	
Pyridine	0.666	0.263	39.5	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.411	61.7	17.0-120	
Benzoic Acid	1.33	0.442	33.2	10.0-120	
Benzyl Alcohol	0.666	0.442	66.4	10.0-120	
4-Chloro-3-methylphenol	0.666	0.421	63.2	28.0-120	
2-Chlorophenol	0.666	0.498	74.8	28.0-120	
2-Methylphenol	0.666	0.479	71.9	35.0-120	
3&4-Methyl Phenol	0.666	0.512	76.9	42.0-120	
2,4-Dichlorophenol	0.666	0.434	65.2	25.0-120	
2,4-Dimethylphenol	0.666	0.422	63.4	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.569	85.4	16.0-120	
2,4-Dinitrophenol	0.666	0.510	76.6	10.0-120	
2-Nitrophenol	0.666	0.438	65.8	20.0-120	
4-Nitrophenol	0.666	0.559	83.9	27.0-120	
Pentachlorophenol	0.666	0.555	83.3	29.0-120	
Phenol	0.666	0.469	70.4	28.0-120	
2,4,5-Trichlorophenol	0.666	0.487	73.1	38.0-120	
2,4,6-Trichlorophenol	0.666	0.533	80.0	37.0-120	
(S) Nitrobenzene-d5			*65.8*	*10.0-122*	
(S) 2-Fluorobiphenyl			*77.5*	*15.0-120*	
(S) p-Terphenyl-d14			*75.1*	*10.0-120*	
(S) Phenol-d5			*71.9*	*10.0-120*	
(S) 2-Fluorophenol			*78.5*	*12.0-120*	
(S) 2,4,6-Tribromophenol			*83.0*	*10.0-127*	

L1311179-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311179-22 02/05/21 19:05 • (MS) R3619962-3 02/05/21 19:31 • (MSD) R3619962-4 02/05/21 19:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.717	U	0.504	0.594	70.3	82.9	10	18.0-120			16.4	32
Acenaphthylene	0.717	0.177	0.634	0.686	63.8	71.0	10	25.0-120			7.76	32
Anthracene	0.717	0.197	0.691	0.707	68.9	71.1	10	22.0-120			2.23	29
Benzo(a)anthracene	0.717	0.430	0.839	1.09	57.1	92.2	10	25.0-120			26.1	29

L1311179-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311179-22 02/05/21 19:05 • (MS) R3619962-3 02/05/21 19:31 • (MSD) R3619962-4 02/05/21 19:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzo(b)fluoranthene	0.717	1.57	1.73	2.24	21.7	93.2	10	19.0-122	V3		25.8	31
Benzo(k)fluoranthene	0.717	0.424	1.06	1.26	89.1	116	10	23.0-120	V3		16.8	30
Benzo(g,h,i)perylene	0.717	0.355	0.528	0.562	24.1	28.9	10	10.0-120	V3		6.33	33
Benzo(a)pyrene	0.717	0.662	1.10	1.32	60.6	92.4	10	24.0-120	V3		18.9	30
Bis(2-chlorethoxy)methane	0.717	U	0.505	0.552	70.5	77.0	10	10.0-120			8.84	34
Bis(2-chloroethyl)ether	0.717	U	0.521	0.601	72.7	83.9	10	10.0-120			14.3	40
2,2-Oxybis(1-Chloropropane)	0.717	U	0.483	0.519	67.4	72.4	10	10.0-120			7.11	40
4-Bromophenyl-phenylether	0.717	U	0.545	0.573	76.1	80.0	10	27.0-120			4.98	30
Carbazole	0.717	U	0.604	0.641	84.3	89.4	10	31.0-120			5.90	24
4-Chloroaniline	0.717	U	0.364	0.461	50.8	64.3	10	10.0-120			23.5	36
2-Chloronaphthalene	0.717	U	0.485	0.559	67.7	78.0	10	20.0-120			14.1	32
4-Chlorophenyl-phenylether	0.717	U	0.559	0.653	78.0	91.1	10	24.0-120			15.6	29
Chrysene	0.717	0.483	1.04	1.28	77.8	111	10	21.0-120			20.6	29
Dibenz(a,h)anthracene	0.717	U	0.345	0.421	48.1	58.7	10	10.0-120			19.8	32
Dibenzofuran	0.717	U	0.572	0.619	79.8	86.3	10	24.0-120			7.85	30
3,3-Dichlorobenzidine	1.44	U	1.01	1.15	70.2	79.8	10	10.0-120			12.9	34
2,4-Dinitrotoluene	0.717	U	0.554	0.581	77.3	81.1	10	30.0-120			4.71	31
2,6-Dinitrotoluene	0.717	U	0.621	0.533	86.6	74.4	10	25.0-120			15.2	31
Fluoranthene	0.717	0.521	0.954	0.958	60.4	61.0	10	18.0-126			0.466	32
Fluorene	0.717	U	0.556	0.615	77.6	85.9	10	25.0-120			10.1	30
Hexachlorobenzene	0.717	U	0.497	0.560	69.4	78.1	10	27.0-120			11.8	28
Hexachloro-1,3-butadiene	0.717	U	0.427	0.580	59.6	80.9	10	10.0-120			30.3	38
Hexachlorocyclopentadiene	0.717	U	U	U	0.000	0.000	10	10.0-120	J6	J6	0.000	40
Hexachloroethane	0.717	U	0.440	0.558	61.3	77.8	10	10.0-120			23.7	40
Indeno(1,2,3-cd)pyrene	0.717	0.322	0.508	0.620	25.9	41.6	10	10.0-120	V3		19.9	32
Isophorone	0.717	U	0.484	0.522	67.5	72.8	10	13.0-120			7.52	34
2-Methylnaphthalene	0.717	U	0.510	0.536	71.1	74.8	10	10.0-120			5.11	37
Naphthalene	0.717	U	0.500	0.544	69.7	75.9	10	10.0-120			8.53	35
2-Nitroaniline	0.717	U	0.628	0.684	87.6	95.5	10	24.0-120			8.65	30
3-Nitroaniline	0.717	U	0.530	0.555	73.9	77.5	10	11.0-120			4.72	32
4-Nitroaniline	0.717	U	0.674	0.633	94.1	88.4	10	15.0-120			6.30	31
Nitrobenzene	0.717	U	0.513	0.553	71.6	77.2	10	10.0-120			7.52	36
n-Nitrosodimethylamine	0.717	U	U	U	0.000	0.000	10	10.0-127	J6	J6	0.000	40
n-Nitrosodiphenylamine	0.717	U	0.495	0.582	69.1	81.2	10	17.0-120			16.1	29
n-Nitrosodi-n-propylamine	0.717	U	0.491	0.549	68.5	76.6	10	10.0-120			11.1	37
Phenanthrene	0.717	0.105	0.597	0.622	68.6	72.2	10	17.0-120			4.20	31
Benzylbutyl phthalate	0.717	U	0.610	0.711	85.1	99.2	10	23.0-120			15.3	30
Bis(2-ethylhexyl)phthalate	0.717	U	0.607	0.690	84.6	96.3	10	17.0-126			12.9	30
Di-n-butyl phthalate	0.717	U	0.506	0.549	70.7	76.6	10	30.0-120			8.02	29

L1311179-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1311179-22 02/05/21 19:05 • (MS) R3619962-3 02/05/21 19:31 • (MSD) R3619962-4 02/05/21 19:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diethyl phthalate	0.717	U	0.534	0.642	74.5	89.6	10	26.0-120			18.4	28
Dimethyl phthalate	0.717	U	U	U	0.000	0.000	10	25.0-120	J6	J6	0.000	29
Di-n-octyl phthalate	0.717	U	0.587	0.673	81.8	93.9	10	21.0-123			13.8	29
Pyrene	0.717	0.755	1.14	1.36	53.1	84.2	10	16.0-121			17.9	32
Pyridine	0.717	U	U	U	0.000	0.000	10	10.0-120	J6	J6	0.000	40
1,2,4-Trichlorobenzene	0.717	U	0.538	0.573	75.0	80.0	10	12.0-120			6.41	37
Benzoic Acid	1.44	U	U	U	0.000	0.000	10	10.0-152	J6	J6	0.000	40
Benzyl Alcohol	0.717	U	0.351	0.377	48.9	52.6	10	10.0-136			7.34	40
4-Chloro-3-methylphenol	0.717	U	0.465	0.578	64.9	80.6	10	15.0-120			21.6	30
2-Chlorophenol	0.717	U	0.503	0.554	70.2	77.3	10	15.0-120			9.68	37
2-Methylphenol	0.717	U	0.442	0.590	61.6	82.3	10	11.0-120			28.7	40
3&4-Methyl Phenol	0.717	U	0.560	0.638	78.1	89.0	10	12.0-123			13.0	38
2,4-Dichlorophenol	0.717	U	0.502	0.593	70.0	82.8	10	20.0-120			16.7	31
2,4-Dimethylphenol	0.717	U	0.501	0.619	69.9	86.3	10	10.0-120			21.1	33
4,6-Dinitro-2-methylphenol	0.717	U	0.975	1.04	136	145	10	10.0-120	J5	J5	6.30	39
2,4-Dinitrophenol	0.717	U	U	0.884	0.000	123	10	10.0-121	J6	J3 J5	200	40
2-Nitrophenol	0.717	U	0.570	0.597	79.5	83.2	10	12.0-120			4.58	39
4-Nitrophenol	0.717	U	0.480	0.575	66.9	80.3	10	10.0-137			18.1	32
Pentachlorophenol	0.717	U	0.522	0.536	72.8	74.8	10	10.0-160			2.73	31
Phenol	0.717	U	0.504	0.534	70.3	74.5	10	12.0-120			5.79	38
2,4,5-Trichlorophenol	0.717	U	0.565	0.637	78.9	88.8	10	20.0-120			11.9	30
2,4,6-Trichlorophenol	0.717	U	0.559	0.642	78.0	89.6	10	19.0-120			13.9	32
(S) Nitrobenzene-d5					*83.2*	*85.1*		*10.0-122*				
(S) 2-Fluorobiphenyl					*85.4*	*83.2*		*15.0-120*				
(S) p-Terphenyl-d14					*91.0*	*98.1*		*10.0-120*				
(S) Phenol-d5					*65.8*	*76.9*		*10.0-120*				
(S) 2-Fluorophenol					*78.0*	*84.0*		*12.0-120*				
(S) 2,4,6-Tribromophenol					*71.1*	*74.8*		*10.0-127*				

Sample Narrative:

OS: Diluted due to matrix impact

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Qualifier	Description
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
T8	Sample(s) received past/too close to holding time expiration.
V3	The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to: Patrick Marty

Email To: Patrick_marty@golder.com;Jacqueline_Engel@g

Project Description: Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected: HOUSTON, TX

Please Circle: PT MT CT ET

Phone: 512-671-3434

Client Project # 1712

Lab Project # UPRRGOLD-1712

Collected by (print): JACQUELINE ENGEL & WILL CARTER

Site/Facility ID # SOIL EVALUATION

P.O. # 4300066026

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8ozClr-NoPres	PH 8ozClr-NoPres	SV8270 8ozClr-NoPres	TPHTX 40mlTW/SyringeNoPres	V8260 40mlAmb/MeOH10ml/Syr					Remarks	Sample # (lab only)
SO-1712-SE06(0-1.25)-20210126	G	SS	1.25	1/26/21	1640	4	✓	✓	✓	✓	✓						-01
SO-1712-SE02(0-3)-20210126	G	SS	3		1415	4	✓		✓	✓	✓						-02
SO-1712-SE03(0-2)-20210126	G	SS	2		1435	4	✓		✓	✓	✓						-03
SO-1712-SE01(0-3)-20210126	G	SS	3		1345	4	✓		✓	✓	✓						-04
SO-1712-SE13(0-0.5)-20210126	G	SS	0.5		1015	4	✓	✓	✓	✓	✓						-05
SO-1712-SE07(0-4)-20210126	G	SS	4		1205	4	✓		✓	✓	✓						-06
SO-1712-SE11(0-1)-20210126	G	SS	1		0950	4	✓		✓	✓	✓						-07
SO-1712-SE05(0-1)-20210126	G	SS	1		1545	4	✓	✓	✓	✓	✓						-08
SO-1712-SE08(0-2)-20210126	G	SS	2		1135	4	✓		✓	✓	✓						-09
SO-1712-SE12(0-0.5)-20210126	G	SS	0.5	↓	1000	4	✓		✓	✓	✓						-10

Chain of Custody Page 1 of 3

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # 431179

C203

Acctnum: UPRRGOLD
Template: T180684
Prelogin: P822407
PM: 134 - Mark W. Beasley
PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: WO52247
STANDARD TAT
UPRR ENG Dept.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: X NP Y N
COC Signed/Accurate: ✓ Y N
Bottles arrive intact: ✓ Y N
Correct bottles used: ✓ Y N
Sufficient volume sent: ✓ Y N
If Applicable
VOA Zero Headspace: ✓ Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: X Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	1/27/21	16:42		2 3	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.3 1.5 °C Bottles Received: 96	
	1/27/21	18:00			
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/28/21 Time: 8:00	Hold: / Condition: NCF / OK

UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to: Patrick Marty

Email To: Patrick_marty@golder.com;Jacqueline_Engel@g

Project Description: Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected: HOUSTON, TX

Please Circle: PT MT CT ET

Phone: 512-671-3434

Client Project # 1712

Lab Project # UPRRGOLD-1712

Collected by (print): JACQUELINE ENGEL & WILL CARTER

Site/Facility ID # SOIL EVALUATION

P.O. # 4300066026

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8ozClr-NoPres	PH 8ozClr-NoPres	SV8270 8ozClr-NoPres	TPHTX 40mlTW/SyringeNoPres	V8260 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
SO-1712-SE10(0-0.5)-20210126	G	SS	0.5	1/26/21	1035	4	✓	✓	✓	✓	✓		-11
SO-1712-SE09(0-0.5)-20210126	G	SS	0.5	↓	1110	4	✓		✓	✓	✓		-12
SO-1712-SE04(0-0.5)-20210126	G	SS	0.5	↓	1515	4	✓		✓	✓	✓		-13
SO-1712-SE24(0-1)-20210127	G	SS	1	1/27/21	1320	4	✓	✓	✓	✓	✓		-14
SO-1712-SE22(0-2)-20210127	G	SS	2	↓	1230	4	✓		✓	✓	✓		-15
SO-1712-SE20(0-0.5)-20210127	G	SS	0.5	↓	1100	4	✓		✓	✓	✓		-16
SO-1712-SE21(0-0.5)-20210127	G	SS	0.5	↓	1110	4	✓	✓	✓	✓	✓		-17
SO-1712-SE15(0-0.5)-20210127	G	SS	0.5	↓	0855	4	✓		✓	✓	✓		-18
SO-1712-SE19(0-1)-20210127	G	SS	1	↓	0955	4	✓		✓	✓	✓		-19
SO-1712-SE23(0-0.5)-20210127	G	SS	0.5	↓	1240	4	✓		✓	✓	✓		-20

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:WO52247
UPRR ENG DEPT.
STANDARD TAT

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: X NP ___ Y ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ✓ Y ___ N
Correct bottles used: ✓ Y ___ N
Sufficient volume sent: ✓ ___ N
If Applicable
VOA Zero Headspace: ✓ Y ___ N
Preservation Correct/Checked: ___ Y ___ N
RAD Screen <0.5 mR/hr: ✓ Y ___ N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	1/27/21	16:42		2	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: AT 1.3 / IR +.2 1.5 °C Bottles Received: 96	
	1/27/21	18:00			
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/28/21 Time: 8:00	Hold: Condition: NCF / OK

Chain of Custody Page 2 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # 431179

Table #

Acctnum: UPRRGOLD

Template: T180684

Prelogin: P822407

PM: 134 - Mark W. Beasley

PB:

Shipped Via:

UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to: Patrick Marty

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Phone: 512-671-3434

Client Project # 1712

Lab Project # UPRRGOLD-1712

Collected by (print): JACQUELINE ENGEL + WILL CARTER

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID # SOIL EVALUATION

P.O. # 4300066026

Quote #

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8oz Clr-NoPres	PH 8oz Clr-NoPres	SV8270 8oz Clr-NoPres	TPHTX 40ml TW/SyringeNoPres	V8260 40ml Amb/MeOH 10ml/Syr						Remarks	Sample # (lab only)
SO-1712-SE14 (0-0.5)-20210127	G	SS	0.5	1/27/21	0845	4	✓		✓	✓	✓							-21
SO-1712-SE16 (0-0.5)-20210127	G	SS	0.5		0905	4	✓		✓	✓	✓							-22
SO-1712-SE18 (0-1.25)-20210127	G	SS	1.25		0940	4	✓	✓	✓	✓	✓							-23
SO-1712-SE17 (0-0.5)-20210127	G	SS	0.5		0910	4	✓		✓	✓	✓							-24
~~TRIP BLANK 01~~		SS																
TB01-20210127	G	~~SS~~ OT	–	1/27/21	–	1					✓							-25
TB02-20210126	G	OT	–	1/26/21	–	1					✓							-26

Chain of Custody Page 3 of 3

Pace Analytical® National Center for Testing & Innovation

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Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # L1311179

Table #

Acctnum: UPRRGOLD

Template: T180684

Prelogin: P822407

PM: 134 - Mark W. Beasley

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: WO52247
UPRR ENG. DEPT.
STANDARD TAT

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: X NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	1/27/21	16:42		2	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.2 °C 1.3 1.5 Bottles Received: 96	
	1/27/21	18:00			
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/28/21 Time: 8:00	Hold: Condition: NCF / OK

ANALYTICAL REPORT

March 31, 2021

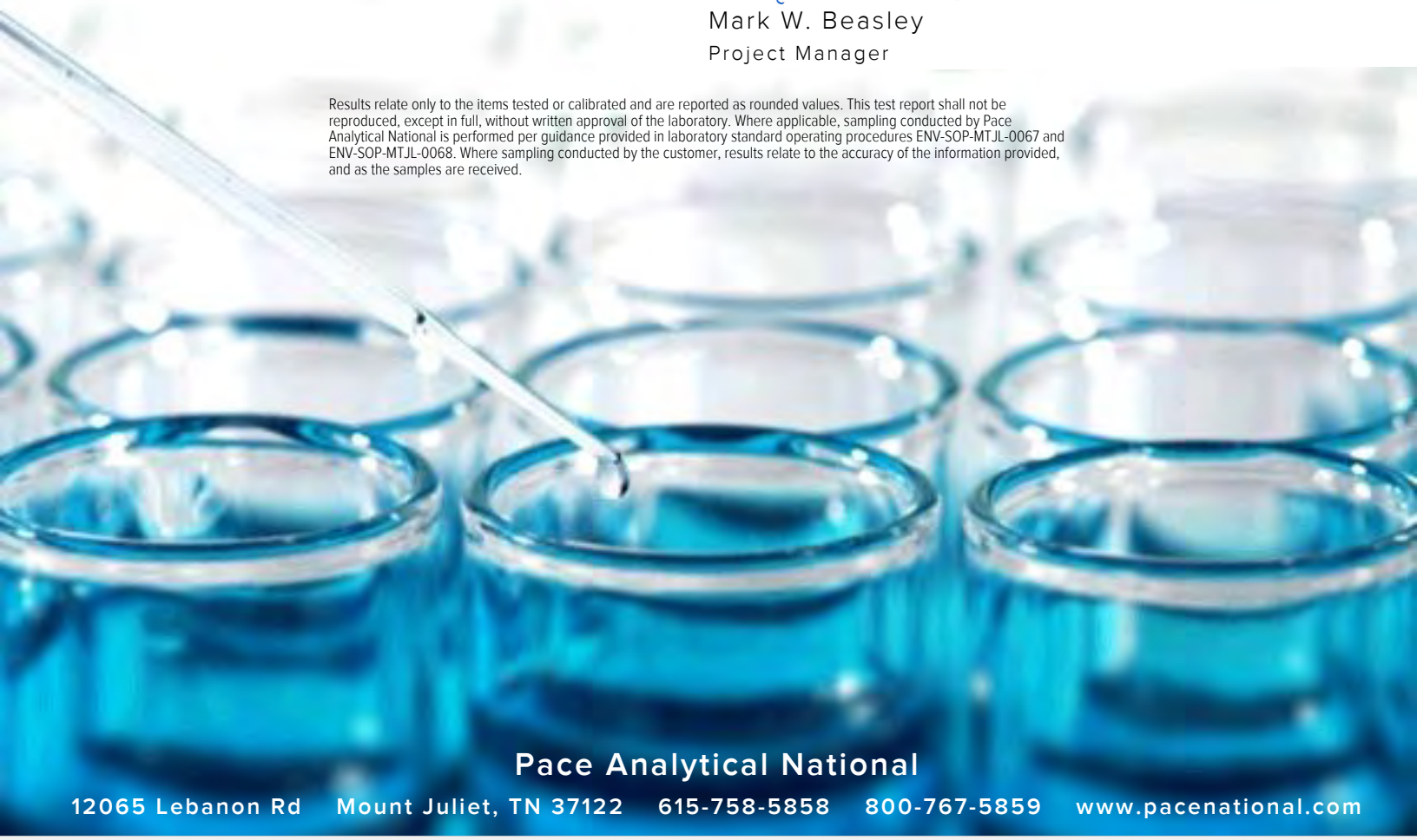
UPRR - Golder Associates

Sample Delivery Group:	L1331861
Samples Received:	03/13/2021
Project Number:	1712
Description:	Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North
Site:	SOIL EVALUATION
Report To:	Patrick Marty
	2201 Double Creek Dr., Ste 4004
	Round Rock, TX 78664

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SO-1712-CA06(0-5)-20210312 L1331861-01 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:50 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636030	1	03/18/21 08:25	03/18/21 08:41	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 06:40	CCE	Mt. Juliet, TN

SO-1712-CA01(0-5)-20210312 L1331861-02 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 06:43	CCE	Mt. Juliet, TN

SO-1712-CA06(5-8)-20210312 L1331861-03 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:55 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 06:45	CCE	Mt. Juliet, TN

SO-1712-CA01(5-8)-20210312 L1331861-04 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 12:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 06:54	CCE	Mt. Juliet, TN

SO-1712-CA03(0-1.5)-20210312 L1331861-05 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 14:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 06:57	CCE	Mt. Juliet, TN

SO-1712-CA03(1.5-1.67)-20210312 L1331861-06 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 14:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 07:00	CCE	Mt. Juliet, TN

SO-1712-CA02(0-2.0)-20210312 L1331861-07 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:05 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 07:03	CCE	Mt. Juliet, TN

SO-1712-CA04(1.5-1.62)-20210312 L1331861-08 Solid

Collected by	Collected date/time	Received date/time
WC/BS	03/12/21 15:05	03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 07:06	CCE	Mt. Juliet, TN

SO-1712-CA05(0-2)-20210312 L1331861-09 Solid

Collected by	Collected date/time	Received date/time
WC/BS	03/12/21 10:40	03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 07:09	CCE	Mt. Juliet, TN

SO-1712-CA04(0-1.5)-20210312 L1331861-10 Solid

Collected by	Collected date/time	Received date/time
WC/BS	03/12/21 15:00	03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1642984	1	03/31/21 02:26	03/31/21 07:12	CCE	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 03/31/2021 13:32
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1331861-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1636030, WG1636034 and WG1642984

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National	LRC Date: 03/31/2021 13:32
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1331861-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1636030, WG1636034 and WG1642984

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 03/31/2021 13:32
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1331861-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1636030, WG1636034 and WG1642984

ER #[1]	Description
The Exception Report intentionally left blank, there are no exceptions applied to this SDG.	

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.6		1	03/18/2021 08:41	WG1636030

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	2.51	J	0.677	2.00	2.61	1	03/31/2021 06:40	WG1642984
Chromium	14.1		0.174	1.00	1.31	1	03/31/2021 06:40	WG1642984
Lead	23.1		0.272	0.500	0.653	1	03/31/2021 06:40	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	1.53	J	0.629	2.00	2.43	1	03/31/2021 06:43	WG1642984
Chromium	14.3		0.161	1.00	1.21	1	03/31/2021 06:43	WG1642984
Lead	21.1		0.253	0.500	0.607	1	03/31/2021 06:43	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.6		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	1.75	J	0.668	2.00	2.58	1	03/31/2021 06:45	WG1642984
Chromium	18.4		0.171	1.00	1.29	1	03/31/2021 06:45	WG1642984
Lead	8.80		0.268	0.500	0.645	1	03/31/2021 06:45	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.1		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	6.36		0.647	2.00	2.50	1	03/31/2021 06:54	WG1642984
Chromium	15.7		0.166	1.00	1.25	1	03/31/2021 06:54	WG1642984
Lead	37.6		0.260	0.500	0.624	1	03/31/2021 06:54	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	1.51	J	0.614	2.00	2.37	1	03/31/2021 06:57	WG1642984
Chromium	8.96		0.158	1.00	1.19	1	03/31/2021 06:57	WG1642984
Lead	7.63		0.247	0.500	0.593	1	03/31/2021 06:57	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.8		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	4.38		0.590	2.00	2.28	1	03/31/2021 07:00	WG1642984
Chromium	14.8		0.152	1.00	1.14	1	03/31/2021 07:00	WG1642984
Lead	26.3		0.237	0.500	0.570	1	03/31/2021 07:00	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.0		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	9.81		0.596	2.00	2.30	1	03/31/2021 07:03	WG1642984
Chromium	17.6		0.153	1.00	1.15	1	03/31/2021 07:03	WG1642984
Lead	77.9		0.239	0.500	0.575	1	03/31/2021 07:03	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.0		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	U		0.576	2.00	2.22	1	03/31/2021 07:06	WG1642984
Chromium	14.4		0.148	1.00	1.11	1	03/31/2021 07:06	WG1642984
Lead	41.7		0.231	0.500	0.556	1	03/31/2021 07:06	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.6		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	1.64	J	0.605	2.00	2.34	1	03/31/2021 07:09	WG1642984
Chromium	10.1		0.155	1.00	1.17	1	03/31/2021 07:09	WG1642984
Lead	10.2		0.243	0.500	0.584	1	03/31/2021 07:09	WG1642984

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.1		1	03/18/2021 08:59	WG1636034

Metals (ICP) by Method 6010B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Arsenic	4.21		0.631	2.00	2.44	1	03/31/2021 07:12	WG1642984
Chromium	8.55		0.162	1.00	1.22	1	03/31/2021 07:12	WG1642984
Lead	10.7		0.253	0.500	0.609	1	03/31/2021 07:12	WG1642984

Method Blank (MB)

(MB) R3632615-1 03/18/21 08:41

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1326825-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1326825-09 03/18/21 08:41 • (DUP) R3632615-3 03/18/21 08:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	79.3	78.2	1	1.43		10

Laboratory Control Sample (LCS)

(LCS) R3632615-2 03/18/21 08:41

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3632616-1 03/18/21 08:59

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1326831-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1326831-09 03/18/21 08:59 • (DUP) R3632616-3 03/18/21 08:59

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.3	83.3	1	1.25		10

Laboratory Control Sample (LCS)

(LCS) R3632616-2 03/18/21 08:59

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

Method Blank (MB)

(MB) R3636579-1 03/31/21 06:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.518	2.00
Chromium	U		0.133	1.00
Lead	U		0.208	0.500

Laboratory Control Sample (LCS)

(LCS) R3636579-2 03/31/21 06:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	94.8	94.8	80.0-120	
Chromium	100	97.7	97.7	80.0-120	
Lead	100	97.8	97.8	80.0-120	

L1332127-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1332127-01 03/31/21 06:26 • (MS) R3636579-5 03/31/21 06:34 • (MSD) R3636579-6 03/31/21 06:37

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	3.27	102	94.7	98.5	91.5	1	75.0-125			7.15	20
Chromium	100	17.1	118	112	101	95.0	1	75.0-125			5.52	20
Lead	100	14.7	116	110	102	95.6	1	75.0-125			5.28	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to:
Patrick Marty

Email To:
Patrick_marty@golder.com;Blake_Sokora@gold

Project Description:
Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected:

Please Circle: PT MT CT ET

Phone: 512-671-3434

Client Project #
1712

Lab Project #
UPRRGOLD-1712

Collected by (print):
WL, BS

Site/Facility ID #
SOIL EVALUATION

P.O. #
4300066026

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

No. of Cntrs

Analysis / Container / Preservative

MRCRA8 8oz Clr-NoPres - Hold 1,12,13,14,15
SV8270 8oz Clr-NoPres
TCLP Metals

Chain of Custody Page 1 of 1

Pace Analytical
National Center for Testing & Innovation

L1331861

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # U326837
D139
L1331156

Acctnum: UPRRGOLD
Template: T183275
Prelogin: P833433
PM: 134 - Mark W. Beasley
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Remarks	Sample # (lab only)
SO-1712-CA06(0-5)-20210312		SS	0-5	3/12/21	1050	1	Hold	-01
SO-1712-CA01(0-5)-20210312		SS	0-5	3/12/21	1230	1	Total	-02
SO-1712-CA06(5-8)-20210312		SS	5-8	3/12/21	1055	1	Metals	-03
SO-1712-CA01(5-8)-20210312		SS	5-8	3/12/21	1235	1		-04
SO-1712-CA03(0-1.5)-20210312		SS	0-1.5	3/12/21	1430	1		-05
SO-1712-CA03(1.5-1.67)-20210312		SS	1.5-1.67	3/12/21	1455	1		-06
SO-1712-CA02(0-2.0)-20210312		SS	0-2.0	3/12/21	1005	1		-07
SO-1712-CA04(1.5-1.62)-20210312		SS	1.5-1.62	3/12/21	1505	1		-08
SO-1712-CA05(0-2)-20210312		SS	0-2	3/12/21	1040	1		-09
SO-1712-CA04(0-1.5)-20210312		SS	0-1.5	3/12/21	1500	1		-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH ____ Temp ____
Flow ____ Other ____

Samples returned via:
___ UPS ___ FedEx ___ Courier

Tracking # 7846 9464 9857

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles Arrive Intact: Y N
Correct Bottles Used: Y N
Sufficient Volume Sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	Temp:	Bottles Received:	If preservation required by Login: Date/Time
	3/12/21	1700			8.3+0.2=8.5	10	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)				
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/13/21	Time: 9:50	Held:	Condition: NCF / OK

AV 3/29/21
AV 3/26/21

L1331156 *UPRRGOLD* relog

R3/R4/RX/EX

Relog L1331156-01 thru -10 for ASICP, CRICP, PBICP. Transfer TS. Log as R4 due 4/1.

From: Reid, Anthony <Anthony_Reid@golder.com>

Sent: Monday, March 29, 2021 3:07 PM

To: Mark Beasley <Mark.Beasley@pacelabs.com>

Cc: Marty, Patrick <Patrick_Marty@golder.com>

Subject: RE: Pace Analytical National Level II Report for 1712 Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North L1331156

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NOTE: This email chain appears to contain email from outside Golder

Mark,

Can you run total arsenic, total lead, and total chromium on these samples with a RUSH 72-hour TAT.

Thank you,

Anthony Reid

***Project Hydrogeologist_

_**

**<!--[if gte vml 1]>

<![endif]--><![if !vml]><![endif]>Golder
Associates Inc.

2201 Double Creek Dr, Suite 4004, Round Rock, Texas, USA 78664

T:
*+1 512-220-7456
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P Please consider the environment before printing this email

Time estimate: oh **Time spent:** oh

Members

MB Mark Beasley (responsible)

ANALYTICAL REPORT

March 29, 2021

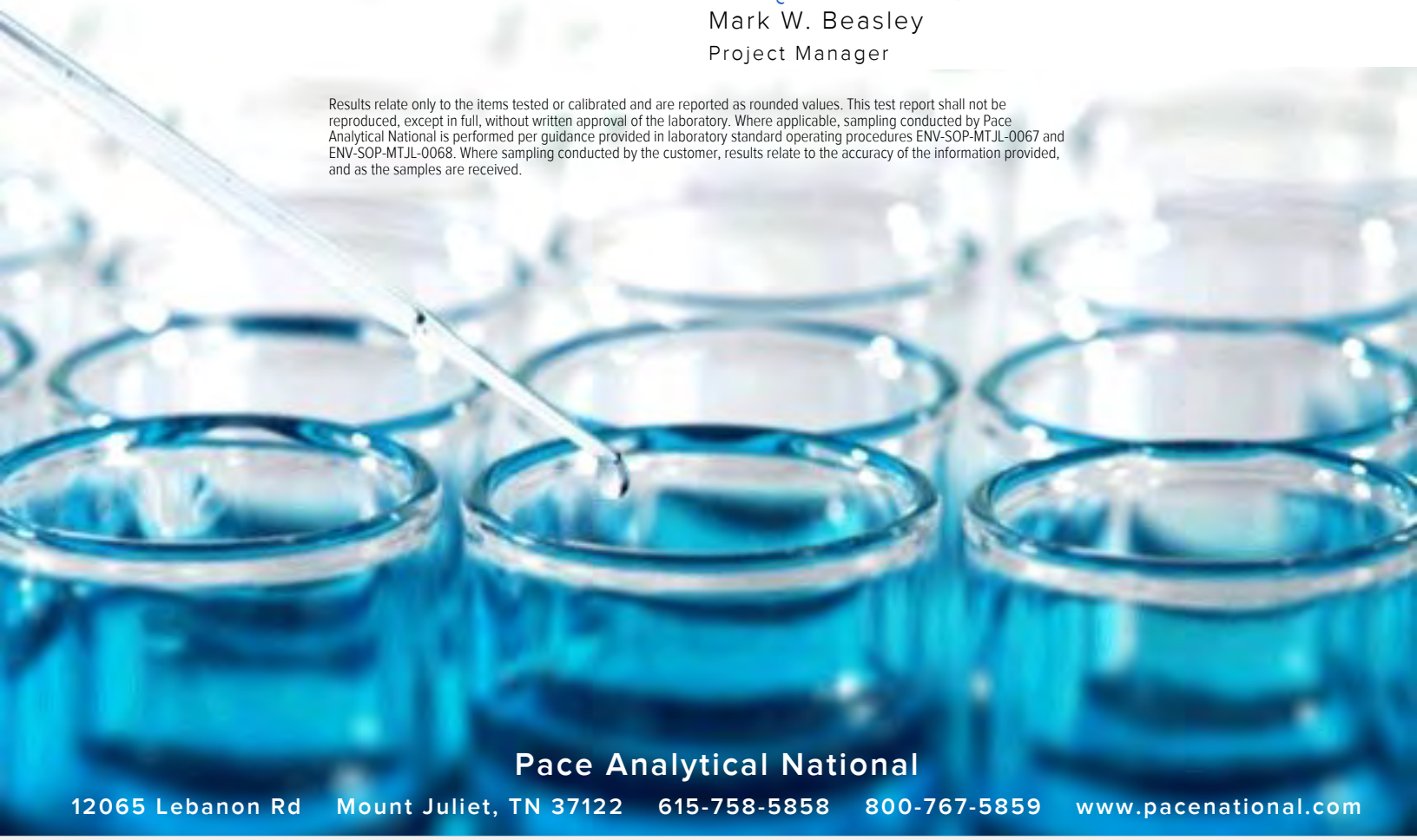
UPRR - Golder Associates

Sample Delivery Group:	L1331156
Samples Received:	03/13/2021
Project Number:	1712
Description:	Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North
Site:	SOIL EVALUATION
Report To:	Patrick Marty
	2201 Double Creek Dr., Ste 4004
	Round Rock, TX 78664

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

SO-1712-CA06(0-5)-20210312 L1331156-01 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:50 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636030	1	03/18/21 08:25	03/18/21 08:41	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 17:14	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641385	1	03/27/21 00:10	03/27/21 16:52	CAG	Mt. Juliet, TN

SO-1712-CA01(0-5)-20210312 L1331156-02 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 12:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 17:33	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1.06	03/27/21 03:31	03/27/21 15:49	CAG	Mt. Juliet, TN

SO-1712-CA06(5-8)-20210312 L1331156-03 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:55 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 17:52	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1	03/27/21 03:31	03/27/21 16:05	CAG	Mt. Juliet, TN

SO-1712-CA01(5-8)-20210312 L1331156-04 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 12:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 18:11	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1	03/27/21 03:31	03/27/21 16:20	CAG	Mt. Juliet, TN

SO-1712-CA03(0-1.5)-20210312 L1331156-05 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 14:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 18:30	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1	03/27/21 03:31	03/27/21 16:36	CAG	Mt. Juliet, TN

SO-1712-CA03(1.5-1.67)-20210312 L1331156-06 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 14:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 18:49	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1	03/27/21 03:31	03/27/21 16:52	CAG	Mt. Juliet, TN

SAMPLE SUMMARY

SO-1712-CA02(0-2.0)-20210312 L1331156-07 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:05 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 19:08	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	5	03/27/21 03:31	03/27/21 18:42	CAG	Mt. Juliet, TN

SO-1712-CA04(1.5-1.62)-20210312 L1331156-08 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 15:05 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 19:27	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1	03/27/21 03:31	03/27/21 17:08	CAG	Mt. Juliet, TN

SO-1712-CA05(0-2)-20210312 L1331156-09 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:40 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 19:45	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1.02	03/27/21 03:31	03/27/21 17:23	CAG	Mt. Juliet, TN

SO-1712-CA04(0-1.5)-20210312 L1331156-10 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 15:00 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	JAV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1641237	1	03/26/21 16:21	03/26/21 20:04	TPR	Mt. Juliet, TN
TPH by TCEQ Method 1005	WG1641386	1	03/27/21 03:31	03/27/21 17:39	CAG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.



Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 03/29/2021 14:33
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1331156-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1636030, WG1636034, WG1641237, WG1641385 and WG1641386

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?		X			1
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	X				
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?		X			2
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National	LRC Date: 03/29/2021 14:33
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1331156-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1636030, WG1636034, WG1641237, WG1641385 and WG1641386

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?			X		
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 03/29/2021 14:33
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1331156-01, 02, 03, 04, 05, 06, 07, 08, 09 and 10
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1636030, WG1636034, WG1641237, WG1641385 and WG1641386

ER #[1]	Description
1	TCEQ Method 1005 WG1641385 L1331156-01: Prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values. TCEQ Method 1005 WG1641386 L1331156-02, 03, 04, 05, 06, 07, 08, 09 and 10: Prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
2	8260B WG1641237 Benzene, Ethylbenzene, Toluene, Xylenes, Total: Relative Percent Difference is outside of established control limits.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.6		1	03/18/2021 08:41	WG1636030

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000766	J	0.000753	0.00100	0.00161	1	03/26/2021 17:14	WG1641237
Toluene	0.00915		0.00210	0.00500	0.00806	1	03/26/2021 17:14	WG1641237
Ethylbenzene	0.0913		0.00119	0.00250	0.00403	1	03/26/2021 17:14	WG1641237
Total Xylenes	0.881		0.00142	0.00650	0.0105	1	03/26/2021 17:14	WG1641237
(S) Toluene-d8	*104*				*75.0-131*		*03/26/2021 17:14*	WG1641237
(S) 4-Bromofluorobenzene	*107*				*67.0-138*		*03/26/2021 17:14*	WG1641237
(S) 1,2-Dichloroethane-d4	*116*				*70.0-130*		*03/26/2021 17:14*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	19.6	50.0	65.3	1	03/27/2021 16:52	WG1641385
TPH C12 - C28	50.3	J T8	19.6	50.0	65.3	1	03/27/2021 16:52	WG1641385
TPH C28 - C35	U	T8	19.6	50.0	65.3	1	03/27/2021 16:52	WG1641385
TPH C6 - C35	50.3	J	19.6	50.0	65.3	1	03/27/2021 16:52	WG1641385
(S) o-Terphenyl	*92.4*				*70.0-130*		*03/27/2021 16:52*	WG1641385

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000667	0.00100	0.00143	1	03/26/2021 17:33	WG1641237
Toluene	0.00279	J	0.00186	0.00500	0.00714	1	03/26/2021 17:33	WG1641237
Ethylbenzene	0.00125	J	0.00105	0.00250	0.00357	1	03/26/2021 17:33	WG1641237
Total Xylenes	0.00837	J	0.00126	0.00650	0.00929	1	03/26/2021 17:33	WG1641237
(S) Toluene-d8	*106*				*75.0-131*		*03/26/2021 17:33*	WG1641237
(S) 4-Bromofluorobenzene	*106*				*67.0-138*		*03/26/2021 17:33*	WG1641237
(S) 1,2-Dichloroethane-d4	*100*				*70.0-130*		*03/26/2021 17:33*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	19.3	50.0	64.4	1.06	03/27/2021 15:49	WG1641386
TPH C12 - C28	22.8	J T8	19.3	50.0	64.4	1.06	03/27/2021 15:49	WG1641386
TPH C28 - C35	U	T8	19.3	50.0	64.4	1.06	03/27/2021 15:49	WG1641386
TPH C6 - C35	22.8	J	19.3	50.0	64.4	1.06	03/27/2021 15:49	WG1641386
(S) o-Terphenyl	*97.0*				*70.0-130*		*03/27/2021 15:49*	WG1641386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.6		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000738	0.00100	0.00158	1	03/26/2021 17:52	WG1641237
Toluene	0.00360	J	0.00205	0.00500	0.00790	1	03/26/2021 17:52	WG1641237
Ethylbenzene	0.00632		0.00116	0.00250	0.00395	1	03/26/2021 17:52	WG1641237
Total Xylenes	0.0869		0.00139	0.00650	0.0103	1	03/26/2021 17:52	WG1641237
(S) Toluene-d8	*109*				*75.0-131*		*03/26/2021 17:52*	WG1641237
(S) 4-Bromofluorobenzene	*108*				*67.0-138*		*03/26/2021 17:52*	WG1641237
(S) 1,2-Dichloroethane-d4	*109*				*70.0-130*		*03/26/2021 17:52*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	24.0	J T8	19.3	50.0	64.5	1	03/27/2021 16:05	WG1641386
TPH C12 - C28	267	T8	19.3	50.0	64.5	1	03/27/2021 16:05	WG1641386
TPH C28 - C35	26.0	J T8	19.3	50.0	64.5	1	03/27/2021 16:05	WG1641386
TPH C6 - C35	317		19.3	50.0	64.5	1	03/27/2021 16:05	WG1641386
(S) o-Terphenyl	*98.7*				*70.0-130*		*03/27/2021 16:05*	WG1641386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.1		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000699	0.00100	0.00150	1	03/26/2021 18:11	WG1641237
Toluene	0.00446	J	0.00195	0.00500	0.00748	1	03/26/2021 18:11	WG1641237
Ethylbenzene	0.00326	J	0.00110	0.00250	0.00374	1	03/26/2021 18:11	WG1641237
Total Xylenes	0.00985		0.00132	0.00650	0.00973	1	03/26/2021 18:11	WG1641237
(S) Toluene-d8	*108*				*75.0-131*		*03/26/2021 18:11*	WG1641237
(S) 4-Bromofluorobenzene	*104*				*67.0-138*		*03/26/2021 18:11*	WG1641237
(S) 1,2-Dichloroethane-d4	*106*				*70.0-130*		*03/26/2021 18:11*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	18.7	50.0	62.4	1	03/27/2021 16:20	WG1641386
TPH C12 - C28	125	T8	18.7	50.0	62.4	1	03/27/2021 16:20	WG1641386
TPH C28 - C35	25.6	J T8	18.7	50.0	62.4	1	03/27/2021 16:20	WG1641386
TPH C6 - C35	150		18.7	50.0	62.4	1	03/27/2021 16:20	WG1641386
(S) o-Terphenyl	*102*				*70.0-130*		*03/27/2021 16:20*	WG1641386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000641	0.00100	0.00137	1	03/26/2021 18:30	WG1641237
Toluene	0.00638	J	0.00178	0.00500	0.00686	1	03/26/2021 18:30	WG1641237
Ethylbenzene	U		0.00101	0.00250	0.00343	1	03/26/2021 18:30	WG1641237
Total Xylenes	0.00124	J	0.00121	0.00650	0.00892	1	03/26/2021 18:30	WG1641237
(S) Toluene-d8	*108*				*75.0-131*		*03/26/2021 18:30*	WG1641237
(S) 4-Bromofluorobenzene	*106*				*67.0-138*		*03/26/2021 18:30*	WG1641237
(S) 1,2-Dichloroethane-d4	*95.6*				*70.0-130*		*03/26/2021 18:30*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	17.8	50.0	59.3	1	03/27/2021 16:36	WG1641386
TPH C12 - C28	92.5	T8	17.8	50.0	59.3	1	03/27/2021 16:36	WG1641386
TPH C28 - C35	46.5	J T8	17.8	50.0	59.3	1	03/27/2021 16:36	WG1641386
TPH C6 - C35	139		17.8	50.0	59.3	1	03/27/2021 16:36	WG1641386
(S) o-Terphenyl	*99.6*				*70.0-130*		*03/27/2021 16:36*	WG1641386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.8		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	0.000767	J	0.000597	0.00100	0.00128	1	03/26/2021 18:49	WG1641237
Toluene	0.0167		0.00166	0.00500	0.00639	1	03/26/2021 18:49	WG1641237
Ethylbenzene	0.0111		0.000942	0.00250	0.00319	1	03/26/2021 18:49	WG1641237
Total Xylenes	0.0281		0.00112	0.00650	0.00831	1	03/26/2021 18:49	WG1641237
(S) Toluene-d8	*109*				*75.0-131*		*03/26/2021 18:49*	WG1641237
(S) 4-Bromofluorobenzene	*111*				*67.0-138*		*03/26/2021 18:49*	WG1641237
(S) 1,2-Dichloroethane-d4	*105*				*70.0-130*		*03/26/2021 18:49*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	17.1	50.0	57.0	1	03/27/2021 16:52	WG1641386
TPH C12 - C28	46.9	J T8	17.1	50.0	57.0	1	03/27/2021 16:52	WG1641386
TPH C28 - C35	42.1	J T8	17.1	50.0	57.0	1	03/27/2021 16:52	WG1641386
TPH C6 - C35	89.1		17.1	50.0	57.0	1	03/27/2021 16:52	WG1641386
(S) o-Terphenyl	*97.2*				*70.0-130*		*03/27/2021 16:52*	WG1641386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.0		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000607	0.00100	0.00130	1	03/26/2021 19:08	WG1641237
Toluene	0.0277		0.00169	0.00500	0.00650	1	03/26/2021 19:08	WG1641237
Ethylbenzene	0.0333		0.000958	0.00250	0.00325	1	03/26/2021 19:08	WG1641237
Total Xylenes	0.152		0.00114	0.00650	0.00845	1	03/26/2021 19:08	WG1641237
(S) Toluene-d8	*107*				*75.0-131*		*03/26/2021 19:08*	WG1641237
(S) 4-Bromofluorobenzene	*105*				*67.0-138*		*03/26/2021 19:08*	WG1641237
(S) 1,2-Dichloroethane-d4	*105*				*70.0-130*		*03/26/2021 19:08*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	122	J T8	86.3	50.0	288	5	03/27/2021 18:42	WG1641386
TPH C12 - C28	1770	T8	86.3	50.0	288	5	03/27/2021 18:42	WG1641386
TPH C28 - C35	629	T8	86.3	50.0	288	5	03/27/2021 18:42	WG1641386
TPH C6 - C35	2520		86.3	50.0	288	5	03/27/2021 18:42	WG1641386
(S) o-Terphenyl	*86.3*				*70.0-130*		*03/27/2021 18:42*	WG1641386

Sample Narrative:

L1331156-07 WG1641386: Dilution due to matrix.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.0		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000571	0.00100	0.00122	1	03/26/2021 19:27	WG1641237
Toluene	0.0157		0.00159	0.00500	0.00612	1	03/26/2021 19:27	WG1641237
Ethylbenzene	0.00591		0.000902	0.00250	0.00306	1	03/26/2021 19:27	WG1641237
Total Xylenes	0.0333		0.00108	0.00650	0.00795	1	03/26/2021 19:27	WG1641237
(S) Toluene-d8	*108*				*75.0-131*		*03/26/2021 19:27*	WG1641237
(S) 4-Bromofluorobenzene	*107*				*67.0-138*		*03/26/2021 19:27*	WG1641237
(S) 1,2-Dichloroethane-d4	*106*				*70.0-130*		*03/26/2021 19:27*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	16.7	50.0	55.6	1	03/27/2021 17:08	WG1641386
TPH C12 - C28	50.6	J T8	16.7	50.0	55.6	1	03/27/2021 17:08	WG1641386
TPH C28 - C35	49.7	J T8	16.7	50.0	55.6	1	03/27/2021 17:08	WG1641386
TPH C6 - C35	100		16.7	50.0	55.6	1	03/27/2021 17:08	WG1641386
(S) o-Terphenyl	*101*				*70.0-130*		*03/27/2021 17:08*	WG1641386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.6		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000624	0.00100	0.00134	1	03/26/2021 19:45	WG1641237
Toluene	0.00338	J	0.00174	0.00500	0.00668	1	03/26/2021 19:45	WG1641237
Ethylbenzene	0.00187	J	0.000985	0.00250	0.00334	1	03/26/2021 19:45	WG1641237
Total Xylenes	0.0125		0.00118	0.00650	0.00869	1	03/26/2021 19:45	WG1641237
(S) Toluene-d8	*108*				*75.0-131*		*03/26/2021 19:45*	WG1641237
(S) 4-Bromofluorobenzene	*108*				*67.0-138*		*03/26/2021 19:45*	WG1641237
(S) 1,2-Dichloroethane-d4	*109*				*70.0-130*		*03/26/2021 19:45*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	17.9	50.0	59.6	1.02	03/27/2021 17:23	WG1641386
TPH C12 - C28	U	T8	17.9	50.0	59.6	1.02	03/27/2021 17:23	WG1641386
TPH C28 - C35	U	T8	17.9	50.0	59.6	1.02	03/27/2021 17:23	WG1641386
TPH C6 - C35	U		17.9	50.0	59.6	1.02	03/27/2021 17:23	WG1641386
(S) o-Terphenyl	*99.2*				*70.0-130*		*03/27/2021 17:23*	WG1641386

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.1		1	03/18/2021 08:59	WG1636034

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
Benzene	U		0.000671	0.00100	0.00144	1	03/26/2021 20:04	WG1641237
Toluene	U		0.00187	0.00500	0.00718	1	03/26/2021 20:04	WG1641237
Ethylbenzene	U		0.00106	0.00250	0.00359	1	03/26/2021 20:04	WG1641237
Total Xylenes	U		0.00126	0.00650	0.00933	1	03/26/2021 20:04	WG1641237
(S) Toluene-d8	*106*				*75.0-131*		*03/26/2021 20:04*	WG1641237
(S) 4-Bromofluorobenzene	*106*				*67.0-138*		*03/26/2021 20:04*	WG1641237
(S) 1,2-Dichloroethane-d4	*93.8*				*70.0-130*		*03/26/2021 20:04*	WG1641237

TPH by TCEQ Method 1005

Analyte	Result (dry)	Qualifier	SDL (dry)	Unadj. MQL	MQL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg	mg/kg		date / time	
TPH C6 - C12	U	T8	18.3	50.0	60.9	1	03/27/2021 17:39	WG1641386
TPH C12 - C28	U	T8	18.3	50.0	60.9	1	03/27/2021 17:39	WG1641386
TPH C28 - C35	U	T8	18.3	50.0	60.9	1	03/27/2021 17:39	WG1641386
TPH C6 - C35	U		18.3	50.0	60.9	1	03/27/2021 17:39	WG1641386
(S) o-Terphenyl	*111*				*70.0-130*		*03/27/2021 17:39*	WG1641386

Method Blank (MB)

(MB) R3632615-1 03/18/21 08:41

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1326825-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1326825-09 03/18/21 08:41 • (DUP) R3632615-3 03/18/21 08:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	79.3	78.2	1	1.43		10

Laboratory Control Sample (LCS)

(LCS) R3632615-2 03/18/21 08:41

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3632616-1 03/18/21 08:59

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1326831-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1326831-09 03/18/21 08:59 • (DUP) R3632616-3 03/18/21 08:59

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.3	83.3	1	1.25		10

Laboratory Control Sample (LCS)

(LCS) R3632616-2 03/18/21 08:59

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

Method Blank (MB)

(MB) R3635391-3 03/26/21 14:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Ethylbenzene	U		0.000737	0.00250
Toluene	U		0.00130	0.00500
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*104*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3635391-1 03/26/21 13:04 • (LCSD) R3635391-2 03/26/21 13:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.123	0.110	98.4	88.0	70.0-123			11.2	20
Ethylbenzene	0.125	0.122	0.116	97.6	92.8	74.0-126			5.04	20
Toluene	0.125	0.126	0.119	101	95.2	75.0-121			5.71	20
Xylenes, Total	0.375	0.369	0.365	98.4	97.3	72.0-127			1.09	20
(S) Toluene-d8				*106*	*107*	*75.0-131*				
(S) 4-Bromofluorobenzene				*110*	*109*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*119*	*112*	*70.0-130*				

L1329489-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1329489-01 03/26/21 22:41 • (MS) R3635391-4 03/27/21 00:34 • (MSD) R3635391-5 03/27/21 00:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.109	U	0.0767	0.0525	70.4	48.2	1	10.0-149		J3	37.5	37
Ethylbenzene	0.109	U	0.0873	0.0497	80.1	45.6	1	10.0-160		J3	54.9	38
Toluene	0.109	U	0.0884	0.0535	81.1	49.1	1	10.0-156		J3	49.2	38
Xylenes, Total	0.327	U	0.258	0.168	78.9	51.4	1	10.0-160		J3	42.3	38
(S) Toluene-d8					*108*	*105*		*75.0-131*				
(S) 4-Bromofluorobenzene					*105*	*104*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*94.3*	*107*		*70.0-130*				

Method Blank (MB)

(MB) R3635570-1 03/27/21 12:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH C6 - C12	U		15.0	50.0
TPH C12 - C28	U		15.0	50.0
TPH C28 - C35	U		15.0	50.0
TPH C6 - C35	U		15.0	50.0
(S) o-Terphenyl	*84.0*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3635570-2 03/27/21 13:05 • (LCSD) R3635570-3 03/27/21 13:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH C6 - C12	250	259	264	104	106	75.0-125			1.91	20
TPH C12 - C28	250	257	260	103	104	75.0-125			1.16	20
TPH C6 - C35	500	516	524	103	105	75.0-125			1.54	20
(S) o-Terphenyl				*90.4*	*93.2*	*70.0-130*				

L1331156-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1331156-01 03/27/21 16:52 • (MS) R3635570-4 03/27/21 17:08 • (MSD) R3635570-5 03/27/21 17:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH C6 - C12	277	U	316	310	114	112	1	75.0-125			2.09	20
TPH C12 - C28	277	50.3	388	374	122	117	1	75.0-125			3.77	20
TPH C6 - C35	554	50.3	704	683	118	115	1	75.0-125			3.01	20
(S) o-Terphenyl					*96.2*	*91.5*		*70.0-130*				

Method Blank (MB)

(MB) R3635574-1 03/27/21 12:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH C6 - C12	U		15.0	50.0
TPH C12 - C28	U		15.0	50.0
TPH C28 - C35	U		15.0	50.0
TPH C6 - C35	U		15.0	50.0
(S) o-Terphenyl	*100*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3635574-2 03/27/21 13:05 • (LCSD) R3635574-3 03/27/21 13:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH C6 - C12	250	300	288	120	115	75.0-125			4.08	20
TPH C12 - C28	250	304	290	122	116	75.0-125			4.71	20
TPH C6 - C35	500	604	578	121	116	75.0-125			4.40	20
(S) o-Terphenyl				*107*	*104*	*70.0-130*				

L1331156-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1331156-10 03/27/21 17:39 • (MS) R3635574-4 03/27/21 17:55 • (MSD) R3635574-5 03/27/21 18:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH C6 - C12	265	U	298	297	112	108	1	75.0-125			0.409	20
TPH C12 - C28	265	U	303	301	114	110	1	75.0-125			0.806	20
TPH C6 - C35	532	U	602	598	113	109	1	75.0-125			0.609	20
(S) o-Terphenyl					*109*	*106*		*70.0-130*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MQL (dry)	Method Quantitation Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
SDL (dry)	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to:
Patrick Marty

Email To:
Patrick_marty@golder.com;Blake_Sokora@gold

Project Description:
Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected:

Please Circle: PT MT CT ET

Phone: 512-671-3434

Client Project #
1712

Lab Project #
UPRRGOLD-1712

Collected by (print):
WC, BS

Site/Facility ID #
SOIL EVALUATION

P.O. #
4300066026

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8oz Clr-NoPres - Hold	SV8270 8oz Clr-NoPres	TCLP Metals								Remarks	Sample # (lab only)
SO-1712-CA06(0-5)-20210312	SS	0-5	3/12/21	1050	1	X	X	X									Hold	-01
SO-1712-CA01(0-5)-20210312	SS	0-5	3/12/21	1230	1	X	X	X									Total	-02
SO-1712-CA06(5-8)-20210312	SS	5-8	3/12/21	1055	1	X	X	X									Metals	-03
SO-1712-CA01(5-8)-20210312	SS	5-8	3/12/21	1235	1	X	X	X										-04
SO-1712-CA03(0-1.5)-20210312	SS	0-1.5	3/12/21	1430	1	X	X	X										-05
SO-1712-CA03(1.5-1.67)-20210312	SS	1.5-1.67	3/12/21	1455	1	X	X	X										-06
SO-1712-CA02(0-2.0)-20210312	SS	0-2.0	3/12/21	1005	1	X	X	X										-07
SO-1712-CA04(1.5-1.62)-20210312	SS	1.5-1.62	3/12/21	1505	1	X	X	X										-08
SO-1712-CA05(0-2)-20210312	SS	0-2	3/12/21	1040	1	X	X	X										-09
SO-1712-CA04(0-1.5)-20210312	SS	0-1.5	3/12/21	1500	1	X	X	X										-10

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgement and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1326831
D139
L1331156

Acctnum: UPRRGOLD
Template: T183275
Prelogin: P833433
PM: 134 - Mark W. Beasley
PB:
Shipped Via:

AV 3/26/21

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7846 9464 9854

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR
	3/12/21	1700		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.3+0.2=0.3 °C Bottles Received: 10
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/13/21 Time: 9:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

L1326831 *UPRRGOLD* rush relog

R1/R2

Relog L1326831-01 thru -20 (odd #'s only) for V8260BTEX, TPHTX. Transfer TS. Log as R2 due 3/29.
Samples go OOH tonight

Thanks

Mark Beasley
Supervisor - Client Operations / National
12065 Lebanon Road | Mt. Juliet, TN 37122
Office: 615.773.9672 | Cell: 615.330.1602
mark.beasley@pacelabs.com<mailto:mark.beasley@pacelabs.com>

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P Please consider the environment before printing this email

Time estimate: oh **Time spent:** oh

Members

MB Mark Beasley (responsible)

ANALYTICAL REPORT

March 26, 2021

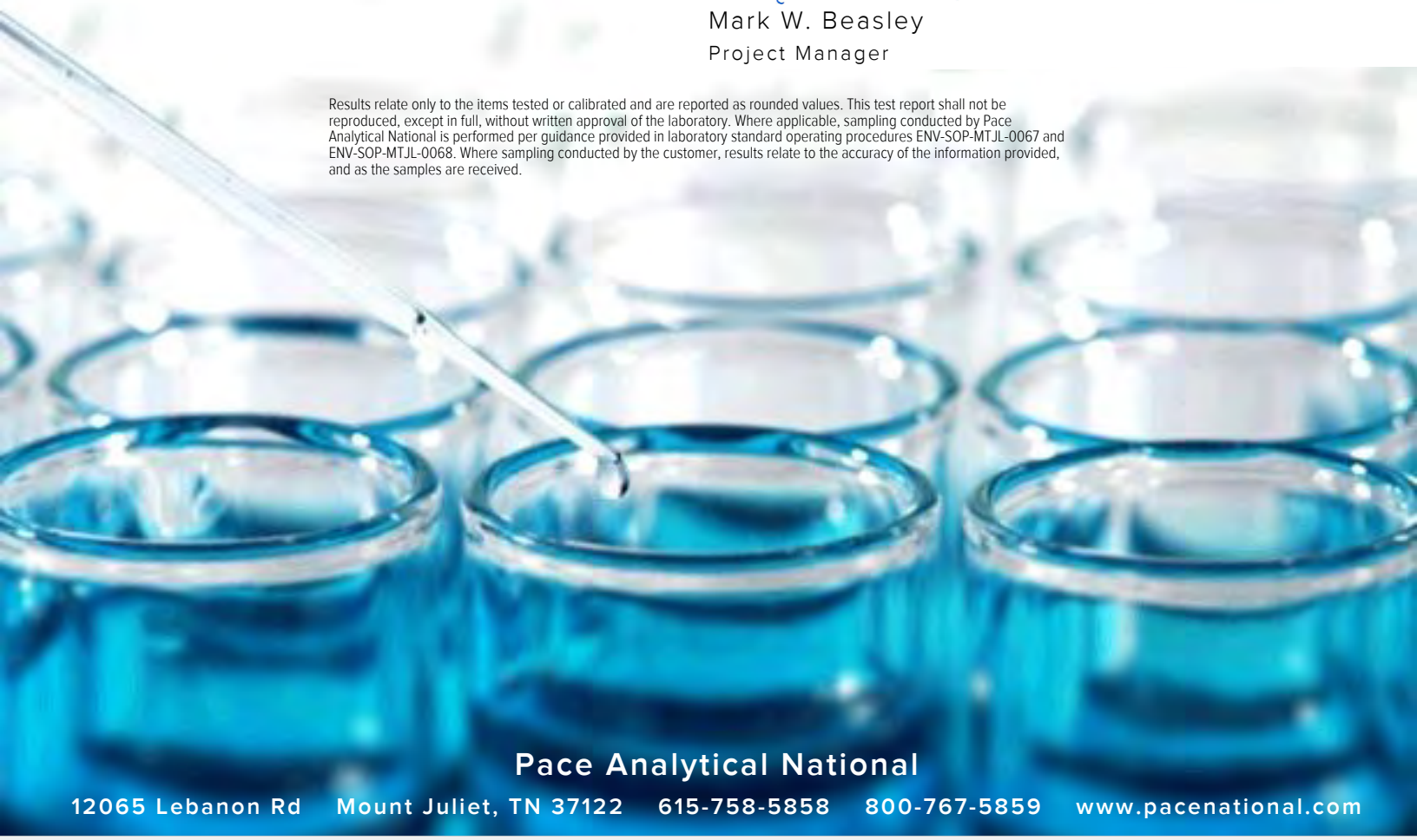
UPRR - Golder Associates

Sample Delivery Group:	L1326831
Samples Received:	03/13/2021
Project Number:	1712
Description:	Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North
Site:	SOIL EVALUATION
Report To:	Patrick Marty
	2201 Double Creek Dr., Ste 4004
	Round Rock, TX 78664

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

SO-1712-CA06(0-5)-20210312 L1326831-01 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:50 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636030	1	03/18/21 08:25	03/18/21 08:41	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 19:55	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	10	03/21/21 10:32	03/23/21 16:10	TMM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	100	03/21/21 10:32	03/23/21 21:47	TMM	Mt. Juliet, TN

SO-1712-CA06(0-5)-20210312 L1326831-02 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 10:50 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636673	1	03/18/21 10:26	03/18/21 17:21	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1636709	1	03/18/21 11:12	03/18/21 17:03	KMG	Mt. Juliet, TN

SO-1712-CA01(0-5)-20210312 L1326831-03 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 12:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 15:06	SHG	Mt. Juliet, TN

SO-1712-CA01(0-5)-20210312 L1326831-04 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 12:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636673	1	03/18/21 10:26	03/18/21 17:22	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1636709	1	03/18/21 11:12	03/18/21 17:12	KMG	Mt. Juliet, TN

SO-1712-CA06(5-8)-20210312 L1326831-05 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:55 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 19:35	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	10	03/21/21 10:32	03/23/21 15:49	TMM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	100	03/21/21 10:32	03/23/21 21:25	TMM	Mt. Juliet, TN

SO-1712-CA06(5-8)-20210312 L1326831-06 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 10:55 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636673	1	03/18/21 10:26	03/18/21 17:37	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1636709	1	03/18/21 11:12	03/18/21 17:15	KMG	Mt. Juliet, TN

SO-1712-CA01(5-8)-20210312 L1326831-07 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 12:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 16:29	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	10	03/21/21 10:32	03/23/21 15:27	TMM	Mt. Juliet, TN

SO-1712-CA01(5-8)-20210312 L1326831-08 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 12:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636673	1	03/18/21 10:26	03/18/21 17:39	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1636709	1	03/18/21 11:12	03/18/21 17:18	KMG	Mt. Juliet, TN

SO-1712-CA03(0-1.5)-20210312 L1326831-09 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 14:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 13:24	SHG	Mt. Juliet, TN

SO-1712-CA03(0-1.5)-20210312 L1326831-10 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 14:30 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636681	1	03/18/21 10:28	03/19/21 08:23	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1637059	1	03/18/21 19:35	03/18/21 23:35	CCE	Mt. Juliet, TN

SO-1712-CA03(1.5-1.67)-20210312 L1326831-11 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 14:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 20:16	SHG	Mt. Juliet, TN

SO-1712-CA03(1.5-1.67)-20210312 L1326831-12 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 14:35 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636681	1	03/18/21 10:29	03/19/21 08:29	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1637059	1	03/18/21 19:36	03/18/21 23:46	CCE	Mt. Juliet, TN

SO-1712-CA02(0-2.0)-20210312 L1326831-13 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:05 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	2	03/21/21 10:32	03/22/21 20:57	SHG	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SO-1712-CA02(0-2.0)-20210312 L1326831-14 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 10:05 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636673	1	03/18/21 10:26	03/18/21 17:41	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1636709	1	03/18/21 11:12	03/18/21 17:21	KMG	Mt. Juliet, TN

SO-1712-CA04(1.5-1.62)-20210312 L1326831-15 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 15:05 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 20:37	SHG	Mt. Juliet, TN

SO-1712-CA04(1.5-1.62)-20210312 L1326831-16 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 15:05 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636681	1	03/18/21 10:29	03/19/21 08:35	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1637059	1	03/18/21 19:36	03/18/21 23:48	CCE	Mt. Juliet, TN

SO-1712-CA05(0-2)-20210312 L1326831-17 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 10:40 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 14:06	SHG	Mt. Juliet, TN

SO-1712-CA05(0-2)-20210312 L1326831-18 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 10:40 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636681	1	03/18/21 10:29	03/19/21 08:37	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1637059	1	03/18/21 19:36	03/18/21 23:51	CCE	Mt. Juliet, TN

SO-1712-CA04(0-1.5)-20210312 L1326831-19 Solid

Collected by: WC/BS | Collected date/time: 03/12/21 15:00 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1636034	1	03/18/21 08:45	03/18/21 08:59	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1637495	1	03/21/21 10:32	03/22/21 13:45	SHG	Mt. Juliet, TN

SO-1712-CA04(0-1.5)-20210312 L1326831-20 Waste

Collected by: WC/BS | Collected date/time: 03/12/21 15:00 | Received date/time: 03/13/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1635849	1	03/17/21 08:28	03/17/21 08:28	APH	Mt. Juliet, TN
Mercury by Method 7470A	WG1636673	1	03/18/21 10:26	03/18/21 17:43	BMF	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1636709	1	03/18/21 11:12	03/18/21 17:24	KMG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.6		1	03/18/2021 08:41	WG1636030

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	11.0		0.0704	0.435	10	03/23/2021 16:10	WG1637495
Acenaphthylene	0.281	J	0.0613	0.435	10	03/23/2021 16:10	WG1637495
Anthracene	6.95		0.0775	0.435	10	03/23/2021 16:10	WG1637495
Benzo(a)anthracene	4.10		0.0767	0.435	10	03/23/2021 16:10	WG1637495
Benzo(b)fluoranthene	2.02		0.00811	0.0435	1	03/22/2021 19:55	WG1637495
Benzo(k)fluoranthene	0.665		0.00773	0.0435	1	03/22/2021 19:55	WG1637495
Benzo(g,h,i)perylene	0.0892		0.00796	0.0435	1	03/22/2021 19:55	WG1637495
Benzo(a)pyrene	0.971		0.00809	0.0435	1	03/22/2021 19:55	WG1637495
Benzoic acid	U		0.154	2.18	1	03/22/2021 19:55	WG1637495
Benzyl alcohol	U		0.0161	0.435	1	03/22/2021 19:55	WG1637495
Bis(2-chlorethoxy)methane	U		0.0131	0.435	1	03/22/2021 19:55	WG1637495
Bis(2-chloroethyl)ether	U		0.0144	0.435	1	03/22/2021 19:55	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0188	0.435	1	03/22/2021 19:55	WG1637495
4-Bromophenyl-phenylether	U		0.153	4.35	10	03/23/2021 16:10	WG1637495
Carbazole	U		0.135	4.35	10	03/23/2021 16:10	WG1637495
2-Chloronaphthalene	U		0.0764	0.435	10	03/23/2021 16:10	WG1637495
4-Chloroaniline	U		0.0157	0.435	1	03/22/2021 19:55	WG1637495
4-Chlorophenyl-phenylether	U		0.152	4.35	10	03/23/2021 16:10	WG1637495
Chrysene	3.50		0.0865	0.435	10	03/23/2021 16:10	WG1637495
Dibenz(a,h)anthracene	0.0400	J	0.0121	0.0435	1	03/22/2021 19:55	WG1637495
Dibenzofuran	8.54		0.142	4.35	10	03/23/2021 16:10	WG1637495
3,3-Dichlorobenzidine	U		0.0161	0.435	1	03/22/2021 19:55	WG1637495
2,4-Dinitrotoluene	U		0.125	4.35	10	03/23/2021 16:10	WG1637495
2,6-Dinitrotoluene	U		0.142	4.35	10	03/23/2021 16:10	WG1637495
Fluoranthene	25.5		0.785	4.35	100	03/23/2021 21:47	WG1637495
Fluorene	12.5		0.0708	0.435	10	03/23/2021 16:10	WG1637495
Hexachlorobenzene	U		0.154	4.35	10	03/23/2021 16:10	WG1637495
Hexachloro-1,3-butadiene	U		0.0146	0.435	1	03/22/2021 19:55	WG1637495
Hexachlorocyclopentadiene	U		0.229	4.35	10	03/23/2021 16:10	WG1637495
Hexachloroethane	U		0.0171	0.435	1	03/22/2021 19:55	WG1637495
Indeno(1,2,3-cd)pyrene	0.131		0.0123	0.0435	1	03/22/2021 19:55	WG1637495
Isophorone	U		0.0133	0.435	1	03/22/2021 19:55	WG1637495
2-Methylnaphthalene	8.23		0.0564	0.435	10	03/23/2021 16:10	WG1637495
Naphthalene	7.93		0.109	0.435	10	03/23/2021 16:10	WG1637495
2-Nitroaniline	U		0.140	4.35	10	03/23/2021 16:10	WG1637495
3-Nitroaniline	U		0.138	4.35	10	03/23/2021 16:10	WG1637495
4-Nitroaniline	U		0.127	4.35	10	03/23/2021 16:10	WG1637495
Nitrobenzene	U		0.0152	0.435	1	03/22/2021 19:55	WG1637495
n-Nitrosodimethylamine	U		0.0645	0.435	1	03/22/2021 19:55	WG1637495
n-Nitrosodiphenylamine	U		0.329	4.35	10	03/23/2021 16:10	WG1637495
n-Nitrosodi-n-propylamine	U		0.0145	0.435	1	03/22/2021 19:55	WG1637495
Phenanthrene	48.6		0.863	4.35	100	03/23/2021 21:47	WG1637495
Benzylbutyl phthalate	U		0.0136	0.435	1	03/22/2021 19:55	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0551	0.435	1	03/22/2021 19:55	WG1637495
Di-n-butyl phthalate	U		0.149	4.35	10	03/23/2021 16:10	WG1637495
Diethyl phthalate	U		0.144	4.35	10	03/23/2021 16:10	WG1637495
Dimethyl phthalate	U		0.922	4.35	10	03/23/2021 16:10	WG1637495
Di-n-octyl phthalate	U		0.0294	0.435	1	03/22/2021 19:55	WG1637495
Pyrene	15.9		0.0846	0.435	10	03/23/2021 16:10	WG1637495
Pyridine	U		0.0287	0.435	1	03/22/2021 19:55	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0136	0.435	1	03/22/2021 19:55	WG1637495
4-Chloro-3-methylphenol	U		0.0141	0.435	1	03/22/2021 19:55	WG1637495
2-Chlorophenol	U		0.0144	0.435	1	03/22/2021 19:55	WG1637495
2,4-Dichlorophenol	U		0.0127	0.435	1	03/22/2021 19:55	WG1637495
2,4-Dimethylphenol	U		0.0114	0.435	1	03/22/2021 19:55	WG1637495
4,6-Dinitro-2-methylphenol	U		0.986	4.35	10	03/23/2021 16:10	WG1637495
2,4-Dinitrophenol	U		1.02	4.35	10	03/23/2021 16:10	WG1637495
2-Methylphenol	U		0.0131	0.435	1	03/22/2021 19:55	WG1637495
3&4-Methyl Phenol	U		0.0136	0.435	1	03/22/2021 19:55	WG1637495
2-Nitrophenol	U		0.0155	0.435	1	03/22/2021 19:55	WG1637495
4-Nitrophenol	U		0.136	4.35	10	03/23/2021 16:10	WG1637495
Pentachlorophenol	U		0.117	4.35	10	03/23/2021 16:10	WG1637495
Phenol	U		0.0175	0.435	1	03/22/2021 19:55	WG1637495
2,4,5-Trichlorophenol	U		0.148	4.35	10	03/23/2021 16:10	WG1637495
2,4,6-Trichlorophenol	U		0.140	4.35	10	03/23/2021 16:10	WG1637495
(S) 2-Fluorophenol	*0.000*	J7		*12.0-120*		*03/23/2021 21:47*	WG1637495
(S) 2-Fluorophenol	*59.1*			*12.0-120*		*03/23/2021 16:10*	WG1637495
(S) 2-Fluorophenol	*44.8*			*12.0-120*		*03/22/2021 19:55*	WG1637495
(S) Phenol-d5	*41.5*			*10.0-120*		*03/22/2021 19:55*	WG1637495
(S) Phenol-d5	*0.000*	J7		*10.0-120*		*03/23/2021 21:47*	WG1637495
(S) Phenol-d5	*51.1*			*10.0-120*		*03/23/2021 16:10*	WG1637495
(S) Nitrobenzene-d5	*0.000*	J7		*10.0-122*		*03/23/2021 21:47*	WG1637495
(S) Nitrobenzene-d5	*34.8*			*10.0-122*		*03/22/2021 19:55*	WG1637495
(S) Nitrobenzene-d5	*45.7*			*10.0-122*		*03/23/2021 16:10*	WG1637495
(S) 2-Fluorobiphenyl	*30.8*			*15.0-120*		*03/22/2021 19:55*	WG1637495
(S) 2-Fluorobiphenyl	*0.000*	J7		*15.0-120*		*03/23/2021 21:47*	WG1637495
(S) 2-Fluorobiphenyl	*59.8*			*15.0-120*		*03/23/2021 16:10*	WG1637495
(S) 2,4,6-Tribromophenol	*64.5*			*10.0-127*		*03/23/2021 16:10*	WG1637495
(S) 2,4,6-Tribromophenol	*0.000*	J7		*10.0-127*		*03/23/2021 21:47*	WG1637495
(S) 2,4,6-Tribromophenol	*0.000*	J2		*10.0-127*		*03/22/2021 19:55*	WG1637495
(S) p-Terphenyl-d14	*84.8*			*10.0-120*		*03/23/2021 16:10*	WG1637495
(S) p-Terphenyl-d14	*0.000*	J7		*10.0-120*		*03/23/2021 21:47*	WG1637495
(S) p-Terphenyl-d14	*67.1*			*10.0-120*		*03/22/2021 19:55*	WG1637495

Sample Narrative:

L1326831-01 WG1637495: IS/SURR failed on lower dilution.

L1326831-01 WG1637495: Surrogate failure due to matrix interference

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	1		3/17/2021 8:28:31 AM	WG1635849
Initial pH	7.49		3/17/2021 8:28:31 AM	WG1635849
Final pH	5.07		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/18/2021 17:21	WG1636673

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 17:03	WG1636709
Barium	1.18		0.100	100	1	03/18/2021 17:03	WG1636709
Cadmium	ND		0.100	1	1	03/18/2021 17:03	WG1636709
Chromium	ND		0.100	5	1	03/18/2021 17:03	WG1636709
Lead	ND		0.100	5	1	03/18/2021 17:03	WG1636709
Selenium	ND		0.100	1	1	03/18/2021 17:03	WG1636709
Silver	ND		0.100	5	1	03/18/2021 17:03	WG1636709

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.4		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	0.0254	J	0.00654	0.0404	1	03/22/2021 15:06	WG1637495
Acenaphthylene	0.0138	J	0.00569	0.0404	1	03/22/2021 15:06	WG1637495
Anthracene	0.0373	J	0.00720	0.0404	1	03/22/2021 15:06	WG1637495
Benzo(a)anthracene	0.0862		0.00713	0.0404	1	03/22/2021 15:06	WG1637495
Benzo(b)fluoranthene	0.142		0.00754	0.0404	1	03/22/2021 15:06	WG1637495
Benzo(k)fluoranthene	0.0437		0.00719	0.0404	1	03/22/2021 15:06	WG1637495
Benzo(g,h,i)perylene	0.0444		0.00739	0.0404	1	03/22/2021 15:06	WG1637495
Benzo(a)pyrene	0.0670		0.00752	0.0404	1	03/22/2021 15:06	WG1637495
Benzoic acid	U		0.143	2.03	1	03/22/2021 15:06	WG1637495
Benzyl alcohol	U		0.0149	0.404	1	03/22/2021 15:06	WG1637495
Bis(2-chlorethoxy)methane	U		0.0121	0.404	1	03/22/2021 15:06	WG1637495
Bis(2-chloroethyl)ether	U		0.0134	0.404	1	03/22/2021 15:06	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0175	0.404	1	03/22/2021 15:06	WG1637495
4-Bromophenyl-phenylether	U		0.0142	0.404	1	03/22/2021 15:06	WG1637495
Carbazole	0.0155	J	0.0125	0.404	1	03/22/2021 15:06	WG1637495
2-Chloronaphthalene	U		0.00710	0.0404	1	03/22/2021 15:06	WG1637495
4-Chloroaniline	U		0.0146	0.404	1	03/22/2021 15:06	WG1637495
4-Chlorophenyl-phenylether	U		0.0141	0.404	1	03/22/2021 15:06	WG1637495
Chrysene	0.113		0.00804	0.0404	1	03/22/2021 15:06	WG1637495
Dibenz(a,h)anthracene	U		0.0112	0.0404	1	03/22/2021 15:06	WG1637495
Dibenzofuran	U		0.0132	0.404	1	03/22/2021 15:06	WG1637495
3,3-Dichlorobenzidine	U		0.0149	0.404	1	03/22/2021 15:06	WG1637495
2,4-Dinitrotoluene	U		0.0116	0.404	1	03/22/2021 15:06	WG1637495
2,6-Dinitrotoluene	U		0.0132	0.404	1	03/22/2021 15:06	WG1637495
Fluoranthene	0.254		0.00730	0.0404	1	03/22/2021 15:06	WG1637495
Fluorene	0.0194	J	0.00658	0.0404	1	03/22/2021 15:06	WG1637495
Hexachlorobenzene	U		0.0143	0.404	1	03/22/2021 15:06	WG1637495
Hexachloro-1,3-butadiene	U		0.0136	0.404	1	03/22/2021 15:06	WG1637495
Hexachlorocyclopentadiene	U		0.0212	0.404	1	03/22/2021 15:06	WG1637495
Hexachloroethane	U		0.0159	0.404	1	03/22/2021 15:06	WG1637495
Indeno(1,2,3-cd)pyrene	0.0464		0.0114	0.0404	1	03/22/2021 15:06	WG1637495
Isophorone	U		0.0124	0.404	1	03/22/2021 15:06	WG1637495
2-Methylnaphthalene	0.00647	J	0.00525	0.0404	1	03/22/2021 15:06	WG1637495
Naphthalene	0.0166	J	0.0102	0.0404	1	03/22/2021 15:06	WG1637495
2-Nitroaniline	U		0.0130	0.404	1	03/22/2021 15:06	WG1637495
3-Nitroaniline	U		0.0129	0.404	1	03/22/2021 15:06	WG1637495
4-Nitroaniline	U		0.0118	0.404	1	03/22/2021 15:06	WG1637495
Nitrobenzene	U		0.0141	0.404	1	03/22/2021 15:06	WG1637495
n-Nitrosodimethylamine	U		0.0600	0.404	1	03/22/2021 15:06	WG1637495
n-Nitrosodiphenylamine	U		0.0306	0.404	1	03/22/2021 15:06	WG1637495
n-Nitrosodi-n-propylamine	U		0.0135	0.404	1	03/22/2021 15:06	WG1637495
Phenanthrene	0.121		0.00803	0.0404	1	03/22/2021 15:06	WG1637495
Benzylbutyl phthalate	U		0.0126	0.404	1	03/22/2021 15:06	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0512	0.404	1	03/22/2021 15:06	WG1637495
Di-n-butyl phthalate	U		0.0138	0.404	1	03/22/2021 15:06	WG1637495
Diethyl phthalate	U		0.0134	0.404	1	03/22/2021 15:06	WG1637495
Dimethyl phthalate	U		0.0857	0.404	1	03/22/2021 15:06	WG1637495
Di-n-octyl phthalate	U		0.0273	0.404	1	03/22/2021 15:06	WG1637495
Pyrene	0.333		0.00787	0.0404	1	03/22/2021 15:06	WG1637495
Pyridine	U		0.0267	0.404	1	03/22/2021 15:06	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0126	0.404	1	03/22/2021 15:06	WG1637495
4-Chloro-3-methylphenol	U		0.0131	0.404	1	03/22/2021 15:06	WG1637495
2-Chlorophenol	U		0.0134	0.404	1	03/22/2021 15:06	WG1637495
2,4-Dichlorophenol	U		0.0118	0.404	1	03/22/2021 15:06	WG1637495
2,4-Dimethylphenol	U		0.0106	0.404	1	03/22/2021 15:06	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0917	0.404	1	03/22/2021 15:06	WG1637495
2,4-Dinitrophenol	U		0.0946	0.404	1	03/22/2021 15:06	WG1637495
2-Methylphenol	U		0.0121	0.404	1	03/22/2021 15:06	WG1637495
3&4-Methyl Phenol	U		0.0126	0.404	1	03/22/2021 15:06	WG1637495
2-Nitrophenol	U		0.0144	0.404	1	03/22/2021 15:06	WG1637495
4-Nitrophenol	U		0.0126	0.404	1	03/22/2021 15:06	WG1637495
Pentachlorophenol	U		0.0109	0.404	1	03/22/2021 15:06	WG1637495
Phenol	U		0.0163	0.404	1	03/22/2021 15:06	WG1637495
2,4,5-Trichlorophenol	U		0.0137	0.404	1	03/22/2021 15:06	WG1637495
2,4,6-Trichlorophenol	U		0.0130	0.404	1	03/22/2021 15:06	WG1637495
(S) 2-Fluorophenol	*68.3*			*12.0-120*		*03/22/2021 15:06*	WG1637495
(S) Phenol-d5	*53.4*			*10.0-120*		*03/22/2021 15:06*	WG1637495
(S) Nitrobenzene-d5	*44.9*			*10.0-122*		*03/22/2021 15:06*	WG1637495
(S) 2-Fluorobiphenyl	*56.9*			*15.0-120*		*03/22/2021 15:06*	WG1637495
(S) 2,4,6-Tribromophenol	*54.0*			*10.0-127*		*03/22/2021 15:06*	WG1637495
(S) p-Terphenyl-d14	*66.5*			*10.0-120*		*03/22/2021 15:06*	WG1637495

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	1		3/17/2021 8:28:31 AM	WG1635849
Initial pH	8.57		3/17/2021 8:28:31 AM	WG1635849
Final pH	6.24		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/18/2021 17:22	WG1636673

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 17:12	WG1636709
Barium	2.51		0.100	100	1	03/18/2021 17:12	WG1636709
Cadmium	ND		0.100	1	1	03/18/2021 17:12	WG1636709
Chromium	ND		0.100	5	1	03/18/2021 17:12	WG1636709
Lead	ND		0.100	5	1	03/18/2021 17:12	WG1636709
Selenium	ND		0.100	1	1	03/18/2021 17:12	WG1636709
Silver	ND		0.100	5	1	03/18/2021 17:12	WG1636709

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.6		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	7.75		0.0695	0.429	10	03/23/2021 15:49	WG1637495
Acenaphthylene	0.137		0.00605	0.0429	1	03/22/2021 19:35	WG1637495
Anthracene	4.40		0.0765	0.429	10	03/23/2021 15:49	WG1637495
Benzo(a)anthracene	2.50		0.0757	0.429	10	03/23/2021 15:49	WG1637495
Benzo(b)fluoranthene	1.11		0.00801	0.0429	1	03/22/2021 19:35	WG1637495
Benzo(k)fluoranthene	0.428		0.00763	0.0429	1	03/22/2021 19:35	WG1637495
Benzo(g,h,i)perylene	0.0542		0.00785	0.0429	1	03/22/2021 19:35	WG1637495
Benzo(a)pyrene	0.579		0.00798	0.0429	1	03/22/2021 19:35	WG1637495
Benzoic acid	U		0.152	2.15	1	03/22/2021 19:35	WG1637495
Benzyl alcohol	U		0.0159	0.429	1	03/22/2021 19:35	WG1637495
Bis(2-chlorethoxy)methane	U		0.0129	0.429	1	03/22/2021 19:35	WG1637495
Bis(2-chloroethyl)ether	U		0.0142	0.429	1	03/22/2021 19:35	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0186	0.429	1	03/22/2021 19:35	WG1637495
4-Bromophenyl-phenylether	U		0.0151	0.429	1	03/22/2021 19:35	WG1637495
Carbazole	2.64	J	0.133	4.29	10	03/23/2021 15:49	WG1637495
2-Chloronaphthalene	U		0.00754	0.0429	1	03/22/2021 19:35	WG1637495
4-Chloroaniline	U		0.0155	0.429	1	03/22/2021 19:35	WG1637495
4-Chlorophenyl-phenylether	U		0.0150	0.429	1	03/22/2021 19:35	WG1637495
Chrysene	2.11		0.0854	0.429	10	03/23/2021 15:49	WG1637495
Dibenz(a,h)anthracene	0.0277	J	0.0119	0.0429	1	03/22/2021 19:35	WG1637495
Dibenzofuran	6.01		0.141	4.29	10	03/23/2021 15:49	WG1637495
3,3-Dichlorobenzidine	U		0.0159	0.429	1	03/22/2021 19:35	WG1637495
2,4-Dinitrotoluene	U		0.0123	0.429	1	03/22/2021 19:35	WG1637495
2,6-Dinitrotoluene	U		0.0141	0.429	1	03/22/2021 19:35	WG1637495
Fluoranthene	14.1		0.0775	0.429	10	03/23/2021 15:49	WG1637495
Fluorene	8.68		0.0699	0.429	10	03/23/2021 15:49	WG1637495
Hexachlorobenzene	U		0.0152	0.429	1	03/22/2021 19:35	WG1637495
Hexachloro-1,3-butadiene	U		0.0144	0.429	1	03/22/2021 19:35	WG1637495
Hexachlorocyclopentadiene	U		0.0226	0.429	1	03/22/2021 19:35	WG1637495
Hexachloroethane	U		0.0169	0.429	1	03/22/2021 19:35	WG1637495
Indeno(1,2,3-cd)pyrene	0.0851		0.0121	0.0429	1	03/22/2021 19:35	WG1637495
Isophorone	U		0.0132	0.429	1	03/22/2021 19:35	WG1637495
2-Methylnaphthalene	5.74		0.0557	0.429	10	03/23/2021 15:49	WG1637495
Naphthalene	11.4		0.108	0.429	10	03/23/2021 15:49	WG1637495
2-Nitroaniline	U		0.0138	0.429	1	03/22/2021 19:35	WG1637495
3-Nitroaniline	U		0.0137	0.429	1	03/22/2021 19:35	WG1637495
4-Nitroaniline	U		0.0125	0.429	1	03/22/2021 19:35	WG1637495
Nitrobenzene	U		0.0150	0.429	1	03/22/2021 19:35	WG1637495
n-Nitrosodimethylamine	U		0.0637	0.429	1	03/22/2021 19:35	WG1637495
n-Nitrosodiphenylamine	U		0.0325	0.429	1	03/22/2021 19:35	WG1637495
n-Nitrosodi-n-propylamine	U		0.0143	0.429	1	03/22/2021 19:35	WG1637495
Phenanthrene	32.4		0.852	4.29	100	03/23/2021 21:25	WG1637495
Benzylbutyl phthalate	U		0.0134	0.429	1	03/22/2021 19:35	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0544	0.429	1	03/22/2021 19:35	WG1637495
Di-n-butyl phthalate	U		0.0147	0.429	1	03/22/2021 19:35	WG1637495
Diethyl phthalate	U		0.0142	0.429	1	03/22/2021 19:35	WG1637495
Dimethyl phthalate	U		0.0910	0.429	1	03/22/2021 19:35	WG1637495
Di-n-octyl phthalate	U		0.0290	0.429	1	03/22/2021 19:35	WG1637495
Pyrene	9.95		0.0835	0.429	10	03/23/2021 15:49	WG1637495
Pyridine	U		0.0284	0.429	1	03/22/2021 19:35	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0134	0.429	1	03/22/2021 19:35	WG1637495
4-Chloro-3-methylphenol	U		0.0139	0.429	1	03/22/2021 19:35	WG1637495
2-Chlorophenol	U		0.0142	0.429	1	03/22/2021 19:35	WG1637495
2,4-Dichlorophenol	U		0.0125	0.429	1	03/22/2021 19:35	WG1637495
2,4-Dimethylphenol	U		0.0112	0.429	1	03/22/2021 19:35	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0973	0.429	1	03/22/2021 19:35	WG1637495
2,4-Dinitrophenol	U		0.100	0.429	1	03/22/2021 19:35	WG1637495
2-Methylphenol	U		0.0129	0.429	1	03/22/2021 19:35	WG1637495
3&4-Methyl Phenol	U		0.0134	0.429	1	03/22/2021 19:35	WG1637495
2-Nitrophenol	U		0.0153	0.429	1	03/22/2021 19:35	WG1637495
4-Nitrophenol	U		0.0134	0.429	1	03/22/2021 19:35	WG1637495
Pentachlorophenol	U		0.0116	0.429	1	03/22/2021 19:35	WG1637495
Phenol	U		0.0173	0.429	1	03/22/2021 19:35	WG1637495
2,4,5-Trichlorophenol	U		0.0146	0.429	1	03/22/2021 19:35	WG1637495
2,4,6-Trichlorophenol	U		0.0138	0.429	1	03/22/2021 19:35	WG1637495
(S) 2-Fluorophenol	*0.000*	J7		*12.0-120*		*03/23/2021 21:25*	WG1637495
(S) 2-Fluorophenol	*54.8*			*12.0-120*		*03/22/2021 19:35*	WG1637495
(S) 2-Fluorophenol	*60.2*			*12.0-120*		*03/23/2021 15:49*	WG1637495
(S) Phenol-d5	*0.000*	J7		*10.0-120*		*03/23/2021 21:25*	WG1637495
(S) Phenol-d5	*50.9*			*10.0-120*		*03/23/2021 15:49*	WG1637495
(S) Phenol-d5	*50.5*			*10.0-120*		*03/22/2021 19:35*	WG1637495
(S) Nitrobenzene-d5	*0.000*	J7		*10.0-122*		*03/23/2021 21:25*	WG1637495
(S) Nitrobenzene-d5	*39.4*			*10.0-122*		*03/22/2021 19:35*	WG1637495
(S) Nitrobenzene-d5	*49.7*			*10.0-122*		*03/23/2021 15:49*	WG1637495
(S) 2-Fluorobiphenyl	*57.2*			*15.0-120*		*03/23/2021 15:49*	WG1637495
(S) 2-Fluorobiphenyl	*42.2*			*15.0-120*		*03/22/2021 19:35*	WG1637495
(S) 2-Fluorobiphenyl	*0.000*	J7		*15.0-120*		*03/23/2021 21:25*	WG1637495
(S) 2,4,6-Tribromophenol	*50.6*			*10.0-127*		*03/22/2021 19:35*	WG1637495
(S) 2,4,6-Tribromophenol	*0.000*	J7		*10.0-127*		*03/23/2021 21:25*	WG1637495
(S) 2,4,6-Tribromophenol	*60.9*			*10.0-127*		*03/23/2021 15:49*	WG1637495
(S) p-Terphenyl-d14	*70.9*			*10.0-120*		*03/22/2021 19:35*	WG1637495
(S) p-Terphenyl-d14	*73.1*			*10.0-120*		*03/23/2021 15:49*	WG1637495
(S) p-Terphenyl-d14	*0.000*	J7		*10.0-120*		*03/23/2021 21:25*	WG1637495

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	1		3/17/2021 8:28:31 AM	WG1635849
Initial pH	7.89		3/17/2021 8:28:31 AM	WG1635849
Final pH	5.12		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/18/2021 17:37	WG1636673

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 17:15	WG1636709
Barium	2.26		0.100	100	1	03/18/2021 17:15	WG1636709
Cadmium	ND		0.100	1	1	03/18/2021 17:15	WG1636709
Chromium	ND		0.100	5	1	03/18/2021 17:15	WG1636709
Lead	ND		0.100	5	1	03/18/2021 17:15	WG1636709
Selenium	ND		0.100	1	1	03/18/2021 17:15	WG1636709
Silver	ND		0.100	5	1	03/18/2021 17:15	WG1636709

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.1		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	4.62		0.0673	0.416	10	03/23/2021 15:27	WG1637495
Acenaphthylene	0.0759		0.00586	0.0416	1	03/22/2021 16:29	WG1637495
Anthracene	3.37		0.0740	0.416	10	03/23/2021 15:27	WG1637495
Benzo(a)anthracene	3.75		0.0733	0.416	10	03/23/2021 15:27	WG1637495
Benzo(b)fluoranthene	1.56		0.00775	0.0416	1	03/22/2021 16:29	WG1637495
Benzo(k)fluoranthene	0.468		0.00739	0.0416	1	03/22/2021 16:29	WG1637495
Benzo(g,h,i)perylene	0.105		0.00760	0.0416	1	03/22/2021 16:29	WG1637495
Benzo(a)pyrene	0.785		0.00773	0.0416	1	03/22/2021 16:29	WG1637495
Benzoic acid	U		0.147	2.09	1	03/22/2021 16:29	WG1637495
Benzyl alcohol	U		0.0154	0.416	1	03/22/2021 16:29	WG1637495
Bis(2-chlorethoxy)methane	U		0.0125	0.416	1	03/22/2021 16:29	WG1637495
Bis(2-chloroethyl)ether	U		0.0137	0.416	1	03/22/2021 16:29	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0180	0.416	1	03/22/2021 16:29	WG1637495
4-Bromophenyl-phenylether	U		0.0146	0.416	1	03/22/2021 16:29	WG1637495
Carbazole	0.113	J	0.0129	0.416	1	03/22/2021 16:29	WG1637495
2-Chloronaphthalene	U		0.00730	0.0416	1	03/22/2021 16:29	WG1637495
4-Chloroaniline	U		0.0150	0.416	1	03/22/2021 16:29	WG1637495
4-Chlorophenyl-phenylether	U		0.0145	0.416	1	03/22/2021 16:29	WG1637495
Chrysene	3.42		0.0827	0.416	10	03/23/2021 15:27	WG1637495
Dibenz(a,h)anthracene	0.0445		0.0115	0.0416	1	03/22/2021 16:29	WG1637495
Dibenzofuran	1.77		0.0136	0.416	1	03/22/2021 16:29	WG1637495
3,3-Dichlorobenzidine	U		0.0154	0.416	1	03/22/2021 16:29	WG1637495
2,4-Dinitrotoluene	U		0.0119	0.416	1	03/22/2021 16:29	WG1637495
2,6-Dinitrotoluene	U		0.0136	0.416	1	03/22/2021 16:29	WG1637495
Fluoranthene	17.9		0.0750	0.416	10	03/23/2021 15:27	WG1637495
Fluorene	5.16		0.0677	0.416	10	03/23/2021 15:27	WG1637495
Hexachlorobenzene	U		0.0147	0.416	1	03/22/2021 16:29	WG1637495
Hexachloro-1,3-butadiene	U		0.0140	0.416	1	03/22/2021 16:29	WG1637495
Hexachlorocyclopentadiene	U		0.0219	0.416	1	03/22/2021 16:29	WG1637495
Hexachloroethane	U		0.0164	0.416	1	03/22/2021 16:29	WG1637495
Indeno(1,2,3-cd)pyrene	0.159		0.0117	0.0416	1	03/22/2021 16:29	WG1637495
Isophorone	U		0.0127	0.416	1	03/22/2021 16:29	WG1637495
2-Methylnaphthalene	0.397		0.00539	0.0416	1	03/22/2021 16:29	WG1637495
Naphthalene	0.0367	J	0.0104	0.0416	1	03/22/2021 16:29	WG1637495
2-Nitroaniline	U		0.0134	0.416	1	03/22/2021 16:29	WG1637495
3-Nitroaniline	U		0.0132	0.416	1	03/22/2021 16:29	WG1637495
4-Nitroaniline	U		0.0121	0.416	1	03/22/2021 16:29	WG1637495
Nitrobenzene	U		0.0145	0.416	1	03/22/2021 16:29	WG1637495
n-Nitrosodimethylamine	U		0.0617	0.416	1	03/22/2021 16:29	WG1637495
n-Nitrosodiphenylamine	U		0.0315	0.416	1	03/22/2021 16:29	WG1637495
n-Nitrosodi-n-propylamine	U		0.0139	0.416	1	03/22/2021 16:29	WG1637495
Phenanthrene	19.9		0.0825	0.416	10	03/23/2021 15:27	WG1637495
Benzylbutyl phthalate	U		0.0130	0.416	1	03/22/2021 16:29	WG1637495
Bis(2-ethylhexyl)phthalate	0.0687	J	0.0527	0.416	1	03/22/2021 16:29	WG1637495
Di-n-butyl phthalate	U		0.0142	0.416	1	03/22/2021 16:29	WG1637495
Diethyl phthalate	U		0.0137	0.416	1	03/22/2021 16:29	WG1637495
Dimethyl phthalate	U		0.0882	0.416	1	03/22/2021 16:29	WG1637495
Di-n-octyl phthalate	U		0.0281	0.416	1	03/22/2021 16:29	WG1637495
Pyrene	14.4		0.0809	0.416	10	03/23/2021 15:27	WG1637495
Pyridine	U		0.0275	0.416	1	03/22/2021 16:29	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0130	0.416	1	03/22/2021 16:29	WG1637495
4-Chloro-3-methylphenol	U		0.0135	0.416	1	03/22/2021 16:29	WG1637495
2-Chlorophenol	U		0.0137	0.416	1	03/22/2021 16:29	WG1637495
2,4-Dichlorophenol	U		0.0121	0.416	1	03/22/2021 16:29	WG1637495
2,4-Dimethylphenol	U		0.0109	0.416	1	03/22/2021 16:29	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0943	0.416	1	03/22/2021 16:29	WG1637495
2,4-Dinitrophenol	U		0.0973	0.416	1	03/22/2021 16:29	WG1637495
2-Methylphenol	U		0.0125	0.416	1	03/22/2021 16:29	WG1637495
3&4-Methyl Phenol	U		0.0130	0.416	1	03/22/2021 16:29	WG1637495
2-Nitrophenol	U		0.0149	0.416	1	03/22/2021 16:29	WG1637495
4-Nitrophenol	U		0.0130	0.416	1	03/22/2021 16:29	WG1637495
Pentachlorophenol	U		0.0112	0.416	1	03/22/2021 16:29	WG1637495
Phenol	U		0.0167	0.416	1	03/22/2021 16:29	WG1637495
2,4,5-Trichlorophenol	U		0.0141	0.416	1	03/22/2021 16:29	WG1637495
2,4,6-Trichlorophenol	U		0.0134	0.416	1	03/22/2021 16:29	WG1637495
(S) 2-Fluorophenol	*52.0*			*12.0-120*		*03/22/2021 16:29*	WG1637495
(S) 2-Fluorophenol	*70.4*			*12.0-120*		*03/23/2021 15:27*	WG1637495
(S) Phenol-d5	*61.2*			*10.0-120*		*03/23/2021 15:27*	WG1637495
(S) Phenol-d5	*45.8*			*10.0-120*		*03/22/2021 16:29*	WG1637495
(S) Nitrobenzene-d5	*41.1*			*10.0-122*		*03/22/2021 16:29*	WG1637495
(S) Nitrobenzene-d5	*56.5*			*10.0-122*		*03/23/2021 15:27*	WG1637495
(S) 2-Fluorobiphenyl	*49.2*			*15.0-120*		*03/22/2021 16:29*	WG1637495
(S) 2-Fluorobiphenyl	*71.3*			*15.0-120*		*03/23/2021 15:27*	WG1637495
(S) 2,4,6-Tribromophenol	*53.8*			*10.0-127*		*03/22/2021 16:29*	WG1637495
(S) 2,4,6-Tribromophenol	*65.3*			*10.0-127*		*03/23/2021 15:27*	WG1637495
(S) p-Terphenyl-d14	*88.2*			*10.0-120*		*03/23/2021 15:27*	WG1637495
(S) p-Terphenyl-d14	*53.8*			*10.0-120*		*03/22/2021 16:29*	WG1637495

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	1		3/17/2021 8:28:31 AM	WG1635849
Initial pH	8.53		3/17/2021 8:28:31 AM	WG1635849
Final pH	6.18		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/18/2021 17:39	WG1636673

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 17:18	WG1636709
Barium	2.53		0.100	100	1	03/18/2021 17:18	WG1636709
Cadmium	ND		0.100	1	1	03/18/2021 17:18	WG1636709
Chromium	ND		0.100	5	1	03/18/2021 17:18	WG1636709
Lead	ND		0.100	5	1	03/18/2021 17:18	WG1636709
Selenium	ND		0.100	1	1	03/18/2021 17:18	WG1636709
Silver	ND		0.100	5	1	03/18/2021 17:18	WG1636709

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	0.00680	J	0.00639	0.0395	1	03/22/2021 13:24	WG1637495
Acenaphthylene	U		0.00556	0.0395	1	03/22/2021 13:24	WG1637495
Anthracene	0.0105	J	0.00703	0.0395	1	03/22/2021 13:24	WG1637495
Benzo(a)anthracene	0.0273	J	0.00696	0.0395	1	03/22/2021 13:24	WG1637495
Benzo(b)fluoranthene	0.0552		0.00737	0.0395	1	03/22/2021 13:24	WG1637495
Benzo(k)fluoranthene	0.0159	J	0.00702	0.0395	1	03/22/2021 13:24	WG1637495
Benzo(g,h,i)perylene	0.0148	J	0.00722	0.0395	1	03/22/2021 13:24	WG1637495
Benzo(a)pyrene	0.0217	J	0.00734	0.0395	1	03/22/2021 13:24	WG1637495
Benzoic acid	U		0.140	1.98	1	03/22/2021 13:24	WG1637495
Benzyl alcohol	U		0.0146	0.395	1	03/22/2021 13:24	WG1637495
Bis(2-chlorethoxy)methane	U		0.0119	0.395	1	03/22/2021 13:24	WG1637495
Bis(2-chloroethyl)ether	U		0.0130	0.395	1	03/22/2021 13:24	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0171	0.395	1	03/22/2021 13:24	WG1637495
4-Bromophenyl-phenylether	U		0.0139	0.395	1	03/22/2021 13:24	WG1637495
Carbazole	U		0.0122	0.395	1	03/22/2021 13:24	WG1637495
2-Chloronaphthalene	U		0.00694	0.0395	1	03/22/2021 13:24	WG1637495
4-Chloroaniline	U		0.0142	0.395	1	03/22/2021 13:24	WG1637495
4-Chlorophenyl-phenylether	U		0.0138	0.395	1	03/22/2021 13:24	WG1637495
Chrysene	0.0281	J	0.00785	0.0395	1	03/22/2021 13:24	WG1637495
Dibenz(a,h)anthracene	U		0.0109	0.0395	1	03/22/2021 13:24	WG1637495
Dibenzofuran	U		0.0129	0.395	1	03/22/2021 13:24	WG1637495
3,3-Dichlorobenzidine	U		0.0146	0.395	1	03/22/2021 13:24	WG1637495
2,4-Dinitrotoluene	U		0.0113	0.395	1	03/22/2021 13:24	WG1637495
2,6-Dinitrotoluene	U		0.0129	0.395	1	03/22/2021 13:24	WG1637495
Fluoranthene	0.126		0.00713	0.0395	1	03/22/2021 13:24	WG1637495
Fluorene	0.00658	J	0.00643	0.0395	1	03/22/2021 13:24	WG1637495
Hexachlorobenzene	U		0.0140	0.395	1	03/22/2021 13:24	WG1637495
Hexachloro-1,3-butadiene	U		0.0133	0.395	1	03/22/2021 13:24	WG1637495
Hexachlorocyclopentadiene	U		0.0208	0.395	1	03/22/2021 13:24	WG1637495
Hexachloroethane	U		0.0155	0.395	1	03/22/2021 13:24	WG1637495
Indeno(1,2,3-cd)pyrene	0.0148	J	0.0112	0.0395	1	03/22/2021 13:24	WG1637495
Isophorone	U		0.0121	0.395	1	03/22/2021 13:24	WG1637495
2-Methylnaphthalene	0.00536	J	0.00512	0.0395	1	03/22/2021 13:24	WG1637495
Naphthalene	U		0.00992	0.0395	1	03/22/2021 13:24	WG1637495
2-Nitroaniline	U		0.0127	0.395	1	03/22/2021 13:24	WG1637495
3-Nitroaniline	U		0.0126	0.395	1	03/22/2021 13:24	WG1637495
4-Nitroaniline	U		0.0115	0.395	1	03/22/2021 13:24	WG1637495
Nitrobenzene	U		0.0138	0.395	1	03/22/2021 13:24	WG1637495
n-Nitrosodimethylamine	U		0.0586	0.395	1	03/22/2021 13:24	WG1637495
n-Nitrosodiphenylamine	U		0.0299	0.395	1	03/22/2021 13:24	WG1637495
n-Nitrosodi-n-propylamine	U		0.0132	0.395	1	03/22/2021 13:24	WG1637495
Phenanthrene	0.0587		0.00784	0.0395	1	03/22/2021 13:24	WG1637495
Benzylbutyl phthalate	U		0.0123	0.395	1	03/22/2021 13:24	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0501	0.395	1	03/22/2021 13:24	WG1637495
Di-n-butyl phthalate	U		0.0135	0.395	1	03/22/2021 13:24	WG1637495
Diethyl phthalate	U		0.0130	0.395	1	03/22/2021 13:24	WG1637495
Dimethyl phthalate	U		0.0837	0.395	1	03/22/2021 13:24	WG1637495
Di-n-octyl phthalate	U		0.0267	0.395	1	03/22/2021 13:24	WG1637495
Pyrene	0.117		0.00769	0.0395	1	03/22/2021 13:24	WG1637495
Pyridine	U		0.0261	0.395	1	03/22/2021 13:24	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0123	0.395	1	03/22/2021 13:24	WG1637495
4-Chloro-3-methylphenol	U		0.0128	0.395	1	03/22/2021 13:24	WG1637495
2-Chlorophenol	U		0.0130	0.395	1	03/22/2021 13:24	WG1637495
2,4-Dichlorophenol	U		0.0115	0.395	1	03/22/2021 13:24	WG1637495
2,4-Dimethylphenol	U		0.0103	0.395	1	03/22/2021 13:24	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0896	0.395	1	03/22/2021 13:24	WG1637495
2,4-Dinitrophenol	U		0.0924	0.395	1	03/22/2021 13:24	WG1637495
2-Methylphenol	U		0.0119	0.395	1	03/22/2021 13:24	WG1637495
3&4-Methyl Phenol	U		0.0123	0.395	1	03/22/2021 13:24	WG1637495
2-Nitrophenol	U		0.0141	0.395	1	03/22/2021 13:24	WG1637495
4-Nitrophenol	U		0.0123	0.395	1	03/22/2021 13:24	WG1637495
Pentachlorophenol	U		0.0106	0.395	1	03/22/2021 13:24	WG1637495
Phenol	U		0.0159	0.395	1	03/22/2021 13:24	WG1637495
2,4,5-Trichlorophenol	U		0.0134	0.395	1	03/22/2021 13:24	WG1637495
2,4,6-Trichlorophenol	U		0.0127	0.395	1	03/22/2021 13:24	WG1637495
(S) 2-Fluorophenol	*55.4*			*12.0-120*		*03/22/2021 13:24*	WG1637495
(S) Phenol-d5	*48.9*			*10.0-120*		*03/22/2021 13:24*	WG1637495
(S) Nitrobenzene-d5	*41.0*			*10.0-122*		*03/22/2021 13:24*	WG1637495
(S) 2-Fluorobiphenyl	*52.8*			*15.0-120*		*03/22/2021 13:24*	WG1637495
(S) 2,4,6-Tribromophenol	*58.1*			*10.0-127*		*03/22/2021 13:24*	WG1637495
(S) p-Terphenyl-d14	*58.7*			*10.0-120*		*03/22/2021 13:24*	WG1637495

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	2		3/17/2021 8:28:31 AM	WG1635849
Initial pH	8.66		3/17/2021 8:28:31 AM	WG1635849
Final pH	3.59		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/19/2021 08:23	WG1636681

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 23:35	WG1637059
Barium	1.40		0.100	100	1	03/18/2021 23:35	WG1637059
Cadmium	ND		0.100	1	1	03/18/2021 23:35	WG1637059
Chromium	ND		0.100	5	1	03/18/2021 23:35	WG1637059
Lead	ND		0.100	5	1	03/18/2021 23:35	WG1637059
Selenium	ND		0.100	1	1	03/18/2021 23:35	WG1637059
Silver	ND		0.100	5	1	03/18/2021 23:35	WG1637059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.8		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	U		0.00614	0.0379	1	03/22/2021 20:16	WG1637495
Acenaphthylene	0.0497		0.00534	0.0379	1	03/22/2021 20:16	WG1637495
Anthracene	0.234		0.00676	0.0379	1	03/22/2021 20:16	WG1637495
Benzo(a)anthracene	0.0616		0.00669	0.0379	1	03/22/2021 20:16	WG1637495
Benzo(b)fluoranthene	0.781		0.00707	0.0379	1	03/22/2021 20:16	WG1637495
Benzo(k)fluoranthene	0.230		0.00674	0.0379	1	03/22/2021 20:16	WG1637495
Benzo(g,h,i)perylene	0.0756		0.00694	0.0379	1	03/22/2021 20:16	WG1637495
Benzo(a)pyrene	0.205		0.00705	0.0379	1	03/22/2021 20:16	WG1637495
Benzoic acid	U		0.134	1.90	1	03/22/2021 20:16	WG1637495
Benzyl alcohol	U		0.0140	0.379	1	03/22/2021 20:16	WG1637495
Bis(2-chlorethoxy)methane	U		0.0114	0.379	1	03/22/2021 20:16	WG1637495
Bis(2-chloroethyl)ether	U		0.0125	0.379	1	03/22/2021 20:16	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0164	0.379	1	03/22/2021 20:16	WG1637495
4-Bromophenyl-phenylether	U		0.0133	0.379	1	03/22/2021 20:16	WG1637495
Carbazole	0.0245	J	0.0117	0.379	1	03/22/2021 20:16	WG1637495
2-Chloronaphthalene	U		0.00666	0.0379	1	03/22/2021 20:16	WG1637495
4-Chloroaniline	U		0.0137	0.379	1	03/22/2021 20:16	WG1637495
4-Chlorophenyl-phenylether	U		0.0132	0.379	1	03/22/2021 20:16	WG1637495
Chrysene	0.174		0.00754	0.0379	1	03/22/2021 20:16	WG1637495
Dibenz(a,h)anthracene	0.0229	J	0.0105	0.0379	1	03/22/2021 20:16	WG1637495
Dibenzofuran	U		0.0124	0.379	1	03/22/2021 20:16	WG1637495
3,3-Dichlorobenzidine	U		0.0140	0.379	1	03/22/2021 20:16	WG1637495
2,4-Dinitrotoluene	U		0.0109	0.379	1	03/22/2021 20:16	WG1637495
2,6-Dinitrotoluene	U		0.0124	0.379	1	03/22/2021 20:16	WG1637495
Fluoranthene	0.252		0.00685	0.0379	1	03/22/2021 20:16	WG1637495
Fluorene	0.00686	J	0.00617	0.0379	1	03/22/2021 20:16	WG1637495
Hexachlorobenzene	U		0.0134	0.379	1	03/22/2021 20:16	WG1637495
Hexachloro-1,3-butadiene	U		0.0128	0.379	1	03/22/2021 20:16	WG1637495
Hexachlorocyclopentadiene	U		0.0199	0.379	1	03/22/2021 20:16	WG1637495
Hexachloroethane	U		0.0149	0.379	1	03/22/2021 20:16	WG1637495
Indeno(1,2,3-cd)pyrene	0.0907		0.0107	0.0379	1	03/22/2021 20:16	WG1637495
Isophorone	U		0.0116	0.379	1	03/22/2021 20:16	WG1637495
2-Methylnaphthalene	U		0.00492	0.0379	1	03/22/2021 20:16	WG1637495
Naphthalene	U		0.00952	0.0379	1	03/22/2021 20:16	WG1637495
2-Nitroaniline	U		0.0122	0.379	1	03/22/2021 20:16	WG1637495
3-Nitroaniline	U		0.0121	0.379	1	03/22/2021 20:16	WG1637495
4-Nitroaniline	U		0.0111	0.379	1	03/22/2021 20:16	WG1637495
Nitrobenzene	U		0.0132	0.379	1	03/22/2021 20:16	WG1637495
n-Nitrosodimethylamine	U		0.0563	0.379	1	03/22/2021 20:16	WG1637495
n-Nitrosodiphenylamine	U		0.0287	0.379	1	03/22/2021 20:16	WG1637495
n-Nitrosodi-n-propylamine	U		0.0126	0.379	1	03/22/2021 20:16	WG1637495
Phenanthrene	0.0171	J	0.00753	0.0379	1	03/22/2021 20:16	WG1637495
Benzylbutyl phthalate	U		0.0118	0.379	1	03/22/2021 20:16	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0481	0.379	1	03/22/2021 20:16	WG1637495
Di-n-butyl phthalate	U		0.0130	0.379	1	03/22/2021 20:16	WG1637495
Diethyl phthalate	U		0.0125	0.379	1	03/22/2021 20:16	WG1637495
Dimethyl phthalate	U		0.0804	0.379	1	03/22/2021 20:16	WG1637495
Di-n-octyl phthalate	U		0.0256	0.379	1	03/22/2021 20:16	WG1637495
Pyrene	0.276		0.00738	0.0379	1	03/22/2021 20:16	WG1637495
Pyridine	U		0.0251	0.379	1	03/22/2021 20:16	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0118	0.379	1	03/22/2021 20:16	WG1637495
4-Chloro-3-methylphenol	U		0.0123	0.379	1	03/22/2021 20:16	WG1637495
2-Chlorophenol	U		0.0125	0.379	1	03/22/2021 20:16	WG1637495
2,4-Dichlorophenol	U		0.0110	0.379	1	03/22/2021 20:16	WG1637495
2,4-Dimethylphenol	U		0.00991	0.379	1	03/22/2021 20:16	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0860	0.379	1	03/22/2021 20:16	WG1637495
2,4-Dinitrophenol	U		0.0887	0.379	1	03/22/2021 20:16	WG1637495
2-Methylphenol	U		0.0114	0.379	1	03/22/2021 20:16	WG1637495
3&4-Methyl Phenol	U		0.0118	0.379	1	03/22/2021 20:16	WG1637495
2-Nitrophenol	U		0.0136	0.379	1	03/22/2021 20:16	WG1637495
4-Nitrophenol	U		0.0118	0.379	1	03/22/2021 20:16	WG1637495
Pentachlorophenol	U		0.0102	0.379	1	03/22/2021 20:16	WG1637495
Phenol	U		0.0153	0.379	1	03/22/2021 20:16	WG1637495
2,4,5-Trichlorophenol	U		0.0129	0.379	1	03/22/2021 20:16	WG1637495
2,4,6-Trichlorophenol	U		0.0122	0.379	1	03/22/2021 20:16	WG1637495
(S) 2-Fluorophenol	*7.65*	J2		*12.0-120*		*03/22/2021 20:16*	WG1637495
(S) Phenol-d5	*7.25*	J2		*10.0-120*		*03/22/2021 20:16*	WG1637495
(S) Nitrobenzene-d5	*6.36*	J2		*10.0-122*		*03/22/2021 20:16*	WG1637495
(S) 2-Fluorobiphenyl	*7.47*	J2		*15.0-120*		*03/22/2021 20:16*	WG1637495
(S) 2,4,6-Tribromophenol	*7.28*	J2		*10.0-127*		*03/22/2021 20:16*	WG1637495
(S) p-Terphenyl-d14	*10.2*			*10.0-120*		*03/22/2021 20:16*	WG1637495

Sample Narrative:

L1326831-11 WG1637495: Surrogate failure due to matrix interference

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	2		3/17/2021 8:28:31 AM	WG1635849
Initial pH	8.85		3/17/2021 8:28:31 AM	WG1635849
Final pH	5.66		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	03/19/2021 08:29	WG1636681

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	03/18/2021 23:46	WG1637059
Barium	1.50		0.100	100	1	03/18/2021 23:46	WG1637059
Cadmium	ND		0.100	1	1	03/18/2021 23:46	WG1637059
Chromium	ND		0.100	5	1	03/18/2021 23:46	WG1637059
Lead	ND		0.100	5	1	03/18/2021 23:46	WG1637059
Selenium	ND		0.100	1	1	03/18/2021 23:46	WG1637059
Silver	ND		0.100	5	1	03/18/2021 23:46	WG1637059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.0		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	0.321		0.0124	0.0766	2	03/22/2021 20:57	WG1637495
Acenaphthylene	0.0592	J	0.0108	0.0766	2	03/22/2021 20:57	WG1637495
Anthracene	0.282		0.0137	0.0766	2	03/22/2021 20:57	WG1637495
Benzo(a)anthracene	0.344		0.0135	0.0766	2	03/22/2021 20:57	WG1637495
Benzo(b)fluoranthene	0.601		0.0143	0.0766	2	03/22/2021 20:57	WG1637495
Benzo(k)fluoranthene	0.186		0.0136	0.0766	2	03/22/2021 20:57	WG1637495
Benzo(g,h,i)perylene	0.0621	J	0.0140	0.0766	2	03/22/2021 20:57	WG1637495
Benzo(a)pyrene	0.229		0.0143	0.0766	2	03/22/2021 20:57	WG1637495
Benzoic acid	U		0.271	3.84	2	03/22/2021 20:57	WG1637495
Benzyl alcohol	U		0.0283	0.766	2	03/22/2021 20:57	WG1637495
Bis(2-chlorethoxy)methane	U		0.0230	0.766	2	03/22/2021 20:57	WG1637495
Bis(2-chloroethyl)ether	U		0.0253	0.766	2	03/22/2021 20:57	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0331	0.766	2	03/22/2021 20:57	WG1637495
4-Bromophenyl-phenylether	U		0.0269	0.766	2	03/22/2021 20:57	WG1637495
Carbazole	0.101	J	0.0237	0.766	2	03/22/2021 20:57	WG1637495
2-Chloronaphthalene	U		0.0135	0.0766	2	03/22/2021 20:57	WG1637495
4-Chloroaniline	U		0.0276	0.766	2	03/22/2021 20:57	WG1637495
4-Chlorophenyl-phenylether	U		0.0267	0.766	2	03/22/2021 20:57	WG1637495
Chrysene	0.391		0.0152	0.0766	2	03/22/2021 20:57	WG1637495
Dibenz(a,h)anthracene	U		0.0213	0.0766	2	03/22/2021 20:57	WG1637495
Dibenzofuran	0.171	J	0.0251	0.766	2	03/22/2021 20:57	WG1637495
3,3-Dichlorobenzidine	U		0.0283	0.766	2	03/22/2021 20:57	WG1637495
2,4-Dinitrotoluene	U		0.0220	0.766	2	03/22/2021 20:57	WG1637495
2,6-Dinitrotoluene	U		0.0251	0.766	2	03/22/2021 20:57	WG1637495
Fluoranthene	2.25		0.0138	0.0766	2	03/22/2021 20:57	WG1637495
Fluorene	0.339		0.0124	0.0766	2	03/22/2021 20:57	WG1637495
Hexachlorobenzene	U		0.0271	0.766	2	03/22/2021 20:57	WG1637495
Hexachloro-1,3-butadiene	U		0.0258	0.766	2	03/22/2021 20:57	WG1637495
Hexachlorocyclopentadiene	U		0.0403	0.766	2	03/22/2021 20:57	WG1637495
Hexachloroethane	U		0.0301	0.766	2	03/22/2021 20:57	WG1637495
Indeno(1,2,3-cd)pyrene	0.0733	J	0.0216	0.0766	2	03/22/2021 20:57	WG1637495
Isophorone	U		0.0235	0.766	2	03/22/2021 20:57	WG1637495
2-Methylnaphthalene	0.0619	J	0.00994	0.0766	2	03/22/2021 20:57	WG1637495
Naphthalene	0.105		0.0192	0.0766	2	03/22/2021 20:57	WG1637495
2-Nitroaniline	U		0.0246	0.766	2	03/22/2021 20:57	WG1637495
3-Nitroaniline	U		0.0244	0.766	2	03/22/2021 20:57	WG1637495
4-Nitroaniline	U		0.0223	0.766	2	03/22/2021 20:57	WG1637495
Nitrobenzene	U		0.0267	0.766	2	03/22/2021 20:57	WG1637495
n-Nitrosodimethylamine	U		0.114	0.766	2	03/22/2021 20:57	WG1637495
n-Nitrosodiphenylamine	U		0.0580	0.766	2	03/22/2021 20:57	WG1637495
n-Nitrosodi-n-propylamine	U		0.0255	0.766	2	03/22/2021 20:57	WG1637495
Phenanthrene	1.90		0.0152	0.0766	2	03/22/2021 20:57	WG1637495
Benzylbutyl phthalate	U		0.0239	0.766	2	03/22/2021 20:57	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0971	0.766	2	03/22/2021 20:57	WG1637495
Di-n-butyl phthalate	U		0.0262	0.766	2	03/22/2021 20:57	WG1637495
Diethyl phthalate	U		0.0253	0.766	2	03/22/2021 20:57	WG1637495
Dimethyl phthalate	U		0.162	0.766	2	03/22/2021 20:57	WG1637495
Di-n-octyl phthalate	U		0.0518	0.766	2	03/22/2021 20:57	WG1637495
Pyrene	1.94		0.0150	0.0766	2	03/22/2021 20:57	WG1637495
Pyridine	U		0.0506	0.766	2	03/22/2021 20:57	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0239	0.766	2	03/22/2021 20:57	WG1637495
4-Chloro-3-methylphenol	U		0.0248	0.766	2	03/22/2021 20:57	WG1637495
2-Chlorophenol	U		0.0253	0.766	2	03/22/2021 20:57	WG1637495
2,4-Dichlorophenol	U		0.0223	0.766	2	03/22/2021 20:57	WG1637495
2,4-Dimethylphenol	U		0.0200	0.766	2	03/22/2021 20:57	WG1637495
4,6-Dinitro-2-methylphenol	U		0.174	0.766	2	03/22/2021 20:57	WG1637495
2,4-Dinitrophenol	U		0.179	0.766	2	03/22/2021 20:57	WG1637495
2-Methylphenol	U		0.0230	0.766	2	03/22/2021 20:57	WG1637495
3&4-Methyl Phenol	U		0.0239	0.766	2	03/22/2021 20:57	WG1637495
2-Nitrophenol	U		0.0274	0.766	2	03/22/2021 20:57	WG1637495
4-Nitrophenol	U		0.0239	0.766	2	03/22/2021 20:57	WG1637495
Pentachlorophenol	U		0.0206	0.766	2	03/22/2021 20:57	WG1637495
Phenol	U		0.0308	0.766	2	03/22/2021 20:57	WG1637495
2,4,5-Trichlorophenol	U		0.0260	0.766	2	03/22/2021 20:57	WG1637495
2,4,6-Trichlorophenol	U		0.0246	0.766	2	03/22/2021 20:57	WG1637495
(S) 2-Fluorophenol	*3.26*	J2		*12.0-120*		*03/22/2021 20:57*	WG1637495
(S) Phenol-d5	*2.93*	J2		*10.0-120*		*03/22/2021 20:57*	WG1637495
(S) Nitrobenzene-d5	*2.88*	J2		*10.0-122*		*03/22/2021 20:57*	WG1637495
(S) 2-Fluorobiphenyl	*3.23*	J2		*15.0-120*		*03/22/2021 20:57*	WG1637495
(S) 2,4,6-Tribromophenol	*2.60*	J2		*10.0-127*		*03/22/2021 20:57*	WG1637495
(S) p-Terphenyl-d14	*6.65*	J2		*10.0-120*		*03/22/2021 20:57*	WG1637495

Sample Narrative:

L1326831-13 WG1637495: Surrogate failure due to matrix interference

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	1		3/17/2021 8:28:31 AM	WG1635849
Initial pH	9.03		3/17/2021 8:28:31 AM	WG1635849
Final pH	6.30		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/18/2021 17:41	WG1636673

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 17:21	WG1636709
Barium	1.44		0.100	100	1	03/18/2021 17:21	WG1636709
Cadmium	ND		0.100	1	1	03/18/2021 17:21	WG1636709
Chromium	ND		0.100	5	1	03/18/2021 17:21	WG1636709
Lead	ND		0.100	5	1	03/18/2021 17:21	WG1636709
Selenium	ND		0.100	1	1	03/18/2021 17:21	WG1636709
Silver	ND		0.100	5	1	03/18/2021 17:21	WG1636709

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.0		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	U		0.00599	0.0370	1	03/22/2021 20:37	WG1637495
Acenaphthylene	0.0671		0.00521	0.0370	1	03/22/2021 20:37	WG1637495
Anthracene	0.173		0.00659	0.0370	1	03/22/2021 20:37	WG1637495
Benzo(a)anthracene	0.0800		0.00653	0.0370	1	03/22/2021 20:37	WG1637495
Benzo(b)fluoranthene	0.496		0.00690	0.0370	1	03/22/2021 20:37	WG1637495
Benzo(k)fluoranthene	0.118		0.00658	0.0370	1	03/22/2021 20:37	WG1637495
Benzo(g,h,i)perylene	0.0680		0.00677	0.0370	1	03/22/2021 20:37	WG1637495
Benzo(a)pyrene	0.167		0.00688	0.0370	1	03/22/2021 20:37	WG1637495
Benzoic acid	U		0.131	1.86	1	03/22/2021 20:37	WG1637495
Benzyl alcohol	U		0.0137	0.370	1	03/22/2021 20:37	WG1637495
Bis(2-chlorethoxy)methane	U		0.0111	0.370	1	03/22/2021 20:37	WG1637495
Bis(2-chloroethyl)ether	U		0.0122	0.370	1	03/22/2021 20:37	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0160	0.370	1	03/22/2021 20:37	WG1637495
4-Bromophenyl-phenylether	U		0.0130	0.370	1	03/22/2021 20:37	WG1637495
Carbazole	0.0209	J	0.0115	0.370	1	03/22/2021 20:37	WG1637495
2-Chloronaphthalene	U		0.00650	0.0370	1	03/22/2021 20:37	WG1637495
4-Chloroaniline	U		0.0133	0.370	1	03/22/2021 20:37	WG1637495
4-Chlorophenyl-phenylether	U		0.0129	0.370	1	03/22/2021 20:37	WG1637495
Chrysene	0.0387		0.00736	0.0370	1	03/22/2021 20:37	WG1637495
Dibenz(a,h)anthracene	0.0180	J	0.0103	0.0370	1	03/22/2021 20:37	WG1637495
Dibenzofuran	U		0.0121	0.370	1	03/22/2021 20:37	WG1637495
3,3-Dichlorobenzidine	U		0.0137	0.370	1	03/22/2021 20:37	WG1637495
2,4-Dinitrotoluene	U		0.0106	0.370	1	03/22/2021 20:37	WG1637495
2,6-Dinitrotoluene	U		0.0121	0.370	1	03/22/2021 20:37	WG1637495
Fluoranthene	0.119		0.00668	0.0370	1	03/22/2021 20:37	WG1637495
Fluorene	U		0.00603	0.0370	1	03/22/2021 20:37	WG1637495
Hexachlorobenzene	U		0.0131	0.370	1	03/22/2021 20:37	WG1637495
Hexachloro-1,3-butadiene	U		0.0125	0.370	1	03/22/2021 20:37	WG1637495
Hexachlorocyclopentadiene	U		0.0195	0.370	1	03/22/2021 20:37	WG1637495
Hexachloroethane	U		0.0146	0.370	1	03/22/2021 20:37	WG1637495
Indeno(1,2,3-cd)pyrene	0.0937		0.0105	0.0370	1	03/22/2021 20:37	WG1637495
Isophorone	U		0.0113	0.370	1	03/22/2021 20:37	WG1637495
2-Methylnaphthalene	U		0.00480	0.0370	1	03/22/2021 20:37	WG1637495
Naphthalene	U		0.00929	0.0370	1	03/22/2021 20:37	WG1637495
2-Nitroaniline	U		0.0119	0.370	1	03/22/2021 20:37	WG1637495
3-Nitroaniline	U		0.0118	0.370	1	03/22/2021 20:37	WG1637495
4-Nitroaniline	U		0.0108	0.370	1	03/22/2021 20:37	WG1637495
Nitrobenzene	U		0.0129	0.370	1	03/22/2021 20:37	WG1637495
n-Nitrosodimethylamine	U		0.0549	0.370	1	03/22/2021 20:37	WG1637495
n-Nitrosodiphenylamine	U		0.0280	0.370	1	03/22/2021 20:37	WG1637495
n-Nitrosodi-n-propylamine	U		0.0123	0.370	1	03/22/2021 20:37	WG1637495
Phenanthrene	0.0208	J	0.00735	0.0370	1	03/22/2021 20:37	WG1637495
Benzylbutyl phthalate	U		0.0116	0.370	1	03/22/2021 20:37	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0469	0.370	1	03/22/2021 20:37	WG1637495
Di-n-butyl phthalate	U		0.0127	0.370	1	03/22/2021 20:37	WG1637495
Diethyl phthalate	U		0.0122	0.370	1	03/22/2021 20:37	WG1637495
Dimethyl phthalate	U		0.0785	0.370	1	03/22/2021 20:37	WG1637495
Di-n-octyl phthalate	U		0.0250	0.370	1	03/22/2021 20:37	WG1637495
Pyrene	0.179		0.00720	0.0370	1	03/22/2021 20:37	WG1637495
Pyridine	U		0.0245	0.370	1	03/22/2021 20:37	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0116	0.370	1	03/22/2021 20:37	WG1637495
4-Chloro-3-methylphenol	U		0.0120	0.370	1	03/22/2021 20:37	WG1637495
2-Chlorophenol	U		0.0122	0.370	1	03/22/2021 20:37	WG1637495
2,4-Dichlorophenol	U		0.0108	0.370	1	03/22/2021 20:37	WG1637495
2,4-Dimethylphenol	U		0.00967	0.370	1	03/22/2021 20:37	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0839	0.370	1	03/22/2021 20:37	WG1637495
2,4-Dinitrophenol	U		0.0866	0.370	1	03/22/2021 20:37	WG1637495
2-Methylphenol	U		0.0111	0.370	1	03/22/2021 20:37	WG1637495
3&4-Methyl Phenol	U		0.0116	0.370	1	03/22/2021 20:37	WG1637495
2-Nitrophenol	U		0.0132	0.370	1	03/22/2021 20:37	WG1637495
4-Nitrophenol	U		0.0116	0.370	1	03/22/2021 20:37	WG1637495
Pentachlorophenol	U		0.00996	0.370	1	03/22/2021 20:37	WG1637495
Phenol	U		0.0149	0.370	1	03/22/2021 20:37	WG1637495
2,4,5-Trichlorophenol	U		0.0126	0.370	1	03/22/2021 20:37	WG1637495
2,4,6-Trichlorophenol	U		0.0119	0.370	1	03/22/2021 20:37	WG1637495
(S) 2-Fluorophenol	*9.03*	J2		*12.0-120*		*03/22/2021 20:37*	WG1637495
(S) Phenol-d5	*8.65*	J2		*10.0-120*		*03/22/2021 20:37*	WG1637495
(S) Nitrobenzene-d5	*7.43*	J2		*10.0-122*		*03/22/2021 20:37*	WG1637495
(S) 2-Fluorobiphenyl	*9.47*	J2		*15.0-120*		*03/22/2021 20:37*	WG1637495
(S) 2,4,6-Tribromophenol	*8.76*	J2		*10.0-127*		*03/22/2021 20:37*	WG1637495
(S) p-Terphenyl-d14	*11.6*			*10.0-120*		*03/22/2021 20:37*	WG1637495

Sample Narrative:

L1326831-15 WG1637495: Surrogate failure due to matrix interference

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	2		3/17/2021 8:28:31 AM	WG1635849
Initial pH	9.04		3/17/2021 8:28:31 AM	WG1635849
Final pH	5.68		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/19/2021 08:35	WG1636681

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 23:48	WG1637059
Barium	0.958		0.100	100	1	03/18/2021 23:48	WG1637059
Cadmium	ND		0.100	1	1	03/18/2021 23:48	WG1637059
Chromium	ND		0.100	5	1	03/18/2021 23:48	WG1637059
Lead	ND		0.100	5	1	03/18/2021 23:48	WG1637059
Selenium	ND		0.100	1	1	03/18/2021 23:48	WG1637059
Silver	ND		0.100	5	1	03/18/2021 23:48	WG1637059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.6		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	U		0.00630	0.0389	1	03/22/2021 14:06	WG1637495
Acenaphthylene	U		0.00548	0.0389	1	03/22/2021 14:06	WG1637495
Anthracene	U		0.00693	0.0389	1	03/22/2021 14:06	WG1637495
Benzo(a)anthracene	U		0.00686	0.0389	1	03/22/2021 14:06	WG1637495
Benzo(b)fluoranthene	U		0.00726	0.0389	1	03/22/2021 14:06	WG1637495
Benzo(k)fluoranthene	U		0.00692	0.0389	1	03/22/2021 14:06	WG1637495
Benzo(g,h,i)perylene	U		0.00712	0.0389	1	03/22/2021 14:06	WG1637495
Benzo(a)pyrene	U		0.00723	0.0389	1	03/22/2021 14:06	WG1637495
Benzoic acid	U		0.138	1.95	1	03/22/2021 14:06	WG1637495
Benzyl alcohol	U		0.0144	0.389	1	03/22/2021 14:06	WG1637495
Bis(2-chlorethoxy)methane	U		0.0117	0.389	1	03/22/2021 14:06	WG1637495
Bis(2-chloroethyl)ether	U		0.0129	0.389	1	03/22/2021 14:06	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0168	0.389	1	03/22/2021 14:06	WG1637495
4-Bromophenyl-phenylether	U		0.0137	0.389	1	03/22/2021 14:06	WG1637495
Carbazole	U		0.0120	0.389	1	03/22/2021 14:06	WG1637495
2-Chloronaphthalene	U		0.00684	0.0389	1	03/22/2021 14:06	WG1637495
4-Chloroaniline	U		0.0140	0.389	1	03/22/2021 14:06	WG1637495
4-Chlorophenyl-phenylether	U		0.0136	0.389	1	03/22/2021 14:06	WG1637495
Chrysene	U		0.00773	0.0389	1	03/22/2021 14:06	WG1637495
Dibenz(a,h)anthracene	U		0.0108	0.0389	1	03/22/2021 14:06	WG1637495
Dibenzofuran	U		0.0127	0.389	1	03/22/2021 14:06	WG1637495
3,3-Dichlorobenzidine	U		0.0144	0.389	1	03/22/2021 14:06	WG1637495
2,4-Dinitrotoluene	U		0.0112	0.389	1	03/22/2021 14:06	WG1637495
2,6-Dinitrotoluene	U		0.0127	0.389	1	03/22/2021 14:06	WG1637495
Fluoranthene	U		0.00702	0.0389	1	03/22/2021 14:06	WG1637495
Fluorene	U		0.00633	0.0389	1	03/22/2021 14:06	WG1637495
Hexachlorobenzene	U		0.0138	0.389	1	03/22/2021 14:06	WG1637495
Hexachloro-1,3-butadiene	U		0.0131	0.389	1	03/22/2021 14:06	WG1637495
Hexachlorocyclopentadiene	U		0.0204	0.389	1	03/22/2021 14:06	WG1637495
Hexachloroethane	U		0.0153	0.389	1	03/22/2021 14:06	WG1637495
Indeno(1,2,3-cd)pyrene	U		0.0110	0.0389	1	03/22/2021 14:06	WG1637495
Isophorone	U		0.0119	0.389	1	03/22/2021 14:06	WG1637495
2-Methylnaphthalene	U		0.00505	0.0389	1	03/22/2021 14:06	WG1637495
Naphthalene	U		0.00977	0.0389	1	03/22/2021 14:06	WG1637495
2-Nitroaniline	U		0.0125	0.389	1	03/22/2021 14:06	WG1637495
3-Nitroaniline	U		0.0124	0.389	1	03/22/2021 14:06	WG1637495
4-Nitroaniline	U		0.0113	0.389	1	03/22/2021 14:06	WG1637495
Nitrobenzene	U		0.0136	0.389	1	03/22/2021 14:06	WG1637495
n-Nitrosodimethylamine	U		0.0577	0.389	1	03/22/2021 14:06	WG1637495
n-Nitrosodiphenylamine	U		0.0294	0.389	1	03/22/2021 14:06	WG1637495
n-Nitrosodi-n-propylamine	U		0.0130	0.389	1	03/22/2021 14:06	WG1637495
Phenanthrene	U		0.00772	0.0389	1	03/22/2021 14:06	WG1637495
Benzylbutyl phthalate	U		0.0122	0.389	1	03/22/2021 14:06	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0493	0.389	1	03/22/2021 14:06	WG1637495
Di-n-butyl phthalate	U		0.0133	0.389	1	03/22/2021 14:06	WG1637495
Diethyl phthalate	U		0.0129	0.389	1	03/22/2021 14:06	WG1637495
Dimethyl phthalate	U		0.0825	0.389	1	03/22/2021 14:06	WG1637495
Di-n-octyl phthalate	U		0.0263	0.389	1	03/22/2021 14:06	WG1637495
Pyrene	U		0.00757	0.0389	1	03/22/2021 14:06	WG1637495
Pyridine	U		0.0257	0.389	1	03/22/2021 14:06	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0122	0.389	1	03/22/2021 14:06	WG1637495
4-Chloro-3-methylphenol	U		0.0126	0.389	1	03/22/2021 14:06	WG1637495
2-Chlorophenol	U		0.0129	0.389	1	03/22/2021 14:06	WG1637495
2,4-Dichlorophenol	U		0.0113	0.389	1	03/22/2021 14:06	WG1637495
2,4-Dimethylphenol	U		0.0102	0.389	1	03/22/2021 14:06	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0882	0.389	1	03/22/2021 14:06	WG1637495
2,4-Dinitrophenol	U		0.0910	0.389	1	03/22/2021 14:06	WG1637495
2-Methylphenol	U		0.0117	0.389	1	03/22/2021 14:06	WG1637495
3&4-Methyl Phenol	U		0.0122	0.389	1	03/22/2021 14:06	WG1637495
2-Nitrophenol	U		0.0139	0.389	1	03/22/2021 14:06	WG1637495
4-Nitrophenol	U		0.0122	0.389	1	03/22/2021 14:06	WG1637495
Pentachlorophenol	U		0.0105	0.389	1	03/22/2021 14:06	WG1637495
Phenol	U		0.0157	0.389	1	03/22/2021 14:06	WG1637495
2,4,5-Trichlorophenol	U		0.0132	0.389	1	03/22/2021 14:06	WG1637495
2,4,6-Trichlorophenol	U		0.0125	0.389	1	03/22/2021 14:06	WG1637495
(S) 2-Fluorophenol	*49.4*			*12.0-120*		*03/22/2021 14:06*	WG1637495
(S) Phenol-d5	*45.2*			*10.0-120*		*03/22/2021 14:06*	WG1637495
(S) Nitrobenzene-d5	*38.6*			*10.0-122*		*03/22/2021 14:06*	WG1637495
(S) 2-Fluorobiphenyl	*48.1*			*15.0-120*		*03/22/2021 14:06*	WG1637495
(S) 2,4,6-Tribromophenol	*46.8*			*10.0-127*		*03/22/2021 14:06*	WG1637495
(S) p-Terphenyl-d14	*49.7*			*10.0-120*		*03/22/2021 14:06*	WG1637495

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	2		3/17/2021 8:28:31 AM	WG1635849
Initial pH	9.50		3/17/2021 8:28:31 AM	WG1635849
Final pH	6.04		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/19/2021 08:37	WG1636681

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 23:51	WG1637059
Barium	0.839		0.100	100	1	03/18/2021 23:51	WG1637059
Cadmium	ND		0.100	1	1	03/18/2021 23:51	WG1637059
Chromium	ND		0.100	5	1	03/18/2021 23:51	WG1637059
Lead	ND		0.100	5	1	03/18/2021 23:51	WG1637059
Selenium	ND		0.100	1	1	03/18/2021 23:51	WG1637059
Silver	ND		0.100	5	1	03/18/2021 23:51	WG1637059

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.1		1	03/18/2021 08:59	WG1636034

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acenaphthene	U		0.00656	0.0406	1	03/22/2021 13:45	WG1637495
Acenaphthylene	U		0.00571	0.0406	1	03/22/2021 13:45	WG1637495
Anthracene	U		0.00722	0.0406	1	03/22/2021 13:45	WG1637495
Benzo(a)anthracene	0.00756	J	0.00715	0.0406	1	03/22/2021 13:45	WG1637495
Benzo(b)fluoranthene	0.0199	J	0.00756	0.0406	1	03/22/2021 13:45	WG1637495
Benzo(k)fluoranthene	U		0.00721	0.0406	1	03/22/2021 13:45	WG1637495
Benzo(g,h,i)perylene	0.0206	J	0.00742	0.0406	1	03/22/2021 13:45	WG1637495
Benzo(a)pyrene	0.00989	J	0.00754	0.0406	1	03/22/2021 13:45	WG1637495
Benzoic acid	U		0.144	2.03	1	03/22/2021 13:45	WG1637495
Benzyl alcohol	U		0.0150	0.406	1	03/22/2021 13:45	WG1637495
Bis(2-chlorethoxy)methane	U		0.0122	0.406	1	03/22/2021 13:45	WG1637495
Bis(2-chloroethyl)ether	U		0.0134	0.406	1	03/22/2021 13:45	WG1637495
2,2-Oxybis(1-Chloropropane)	U		0.0175	0.406	1	03/22/2021 13:45	WG1637495
4-Bromophenyl-phenylether	U		0.0142	0.406	1	03/22/2021 13:45	WG1637495
Carbazole	U		0.0125	0.406	1	03/22/2021 13:45	WG1637495
2-Chloronaphthalene	U		0.00712	0.0406	1	03/22/2021 13:45	WG1637495
4-Chloroaniline	U		0.0146	0.406	1	03/22/2021 13:45	WG1637495
4-Chlorophenyl-phenylether	U		0.0141	0.406	1	03/22/2021 13:45	WG1637495
Chrysene	U		0.00806	0.0406	1	03/22/2021 13:45	WG1637495
Dibenz(a,h)anthracene	U		0.0112	0.0406	1	03/22/2021 13:45	WG1637495
Dibenzofuran	U		0.0133	0.406	1	03/22/2021 13:45	WG1637495
3,3-Dichlorobenzidine	U		0.0150	0.406	1	03/22/2021 13:45	WG1637495
2,4-Dinitrotoluene	U		0.0116	0.406	1	03/22/2021 13:45	WG1637495
2,6-Dinitrotoluene	U		0.0133	0.406	1	03/22/2021 13:45	WG1637495
Fluoranthene	0.0114	J	0.00732	0.0406	1	03/22/2021 13:45	WG1637495
Fluorene	U		0.00660	0.0406	1	03/22/2021 13:45	WG1637495
Hexachlorobenzene	U		0.0144	0.406	1	03/22/2021 13:45	WG1637495
Hexachloro-1,3-butadiene	U		0.0136	0.406	1	03/22/2021 13:45	WG1637495
Hexachlorocyclopentadiene	U		0.0213	0.406	1	03/22/2021 13:45	WG1637495
Hexachloroethane	U		0.0160	0.406	1	03/22/2021 13:45	WG1637495
Indeno(1,2,3-cd)pyrene	0.0151	J	0.0115	0.0406	1	03/22/2021 13:45	WG1637495
Isophorone	U		0.0124	0.406	1	03/22/2021 13:45	WG1637495
2-Methylnaphthalene	U		0.00526	0.0406	1	03/22/2021 13:45	WG1637495
Naphthalene	U		0.0102	0.0406	1	03/22/2021 13:45	WG1637495
2-Nitroaniline	U		0.0130	0.406	1	03/22/2021 13:45	WG1637495
3-Nitroaniline	U		0.0129	0.406	1	03/22/2021 13:45	WG1637495
4-Nitroaniline	U		0.0118	0.406	1	03/22/2021 13:45	WG1637495
Nitrobenzene	U		0.0141	0.406	1	03/22/2021 13:45	WG1637495
n-Nitrosodimethylamine	U		0.0602	0.406	1	03/22/2021 13:45	WG1637495
n-Nitrosodiphenylamine	U		0.0307	0.406	1	03/22/2021 13:45	WG1637495
n-Nitrosodi-n-propylamine	U		0.0135	0.406	1	03/22/2021 13:45	WG1637495
Phenanthrene	U		0.00805	0.0406	1	03/22/2021 13:45	WG1637495
Benzylbutyl phthalate	U		0.0127	0.406	1	03/22/2021 13:45	WG1637495
Bis(2-ethylhexyl)phthalate	U		0.0514	0.406	1	03/22/2021 13:45	WG1637495
Di-n-butyl phthalate	U		0.0139	0.406	1	03/22/2021 13:45	WG1637495
Diethyl phthalate	U		0.0134	0.406	1	03/22/2021 13:45	WG1637495
Dimethyl phthalate	U		0.0860	0.406	1	03/22/2021 13:45	WG1637495
Di-n-octyl phthalate	U		0.0274	0.406	1	03/22/2021 13:45	WG1637495
Pyrene	0.0128	J	0.00789	0.0406	1	03/22/2021 13:45	WG1637495
Pyridine	U		0.0268	0.406	1	03/22/2021 13:45	WG1637495

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.0127	0.406	1	03/22/2021 13:45	WG1637495
4-Chloro-3-methylphenol	U		0.0132	0.406	1	03/22/2021 13:45	WG1637495
2-Chlorophenol	U		0.0134	0.406	1	03/22/2021 13:45	WG1637495
2,4-Dichlorophenol	U		0.0118	0.406	1	03/22/2021 13:45	WG1637495
2,4-Dimethylphenol	U		0.0106	0.406	1	03/22/2021 13:45	WG1637495
4,6-Dinitro-2-methylphenol	U		0.0919	0.406	1	03/22/2021 13:45	WG1637495
2,4-Dinitrophenol	U		0.0949	0.406	1	03/22/2021 13:45	WG1637495
2-Methylphenol	U		0.0122	0.406	1	03/22/2021 13:45	WG1637495
3&4-Methyl Phenol	U		0.0127	0.406	1	03/22/2021 13:45	WG1637495
2-Nitrophenol	U		0.0145	0.406	1	03/22/2021 13:45	WG1637495
4-Nitrophenol	U		0.0127	0.406	1	03/22/2021 13:45	WG1637495
Pentachlorophenol	U		0.0109	0.406	1	03/22/2021 13:45	WG1637495
Phenol	U		0.0163	0.406	1	03/22/2021 13:45	WG1637495
2,4,5-Trichlorophenol	U		0.0138	0.406	1	03/22/2021 13:45	WG1637495
2,4,6-Trichlorophenol	U		0.0130	0.406	1	03/22/2021 13:45	WG1637495
(S) 2-Fluorophenol	*54.1*			*12.0-120*		*03/22/2021 13:45*	WG1637495
(S) Phenol-d5	*48.1*			*10.0-120*		*03/22/2021 13:45*	WG1637495
(S) Nitrobenzene-d5	*40.3*			*10.0-122*		*03/22/2021 13:45*	WG1637495
(S) 2-Fluorobiphenyl	*52.5*			*15.0-120*		*03/22/2021 13:45*	WG1637495
(S) 2,4,6-Tribromophenol	*57.5*			*10.0-127*		*03/22/2021 13:45*	WG1637495
(S) p-Terphenyl-d14	*58.4*			*10.0-120*		*03/22/2021 13:45*	WG1637495

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		3/17/2021 8:28:31 AM	WG1635849
Fluid	1		3/17/2021 8:28:31 AM	WG1635849
Initial pH	9.10		3/17/2021 8:28:31 AM	WG1635849
Final pH	5.51		3/17/2021 8:28:31 AM	WG1635849

Mercury by Method 7470A

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Mercury	ND		0.0100	0.20	1	03/18/2021 17:43	WG1636673

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
	mg/l		mg/l	mg/l			
Arsenic	ND		0.100	5	1	03/18/2021 17:24	WG1636709
Barium	2.02		0.100	100	1	03/18/2021 17:24	WG1636709
Cadmium	ND		0.100	1	1	03/18/2021 17:24	WG1636709
Chromium	ND		0.100	5	1	03/18/2021 17:24	WG1636709
Lead	ND		0.100	5	1	03/18/2021 17:24	WG1636709
Selenium	ND		0.100	1	1	03/18/2021 17:24	WG1636709
Silver	ND		0.100	5	1	03/18/2021 17:24	WG1636709

Method Blank (MB)

(MB) R3632615-1 03/18/21 08:41

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1326825-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1326825-09 03/18/21 08:41 • (DUP) R3632615-3 03/18/21 08:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	79.3	78.2	1	1.43		10

Laboratory Control Sample (LCS)

(LCS) R3632615-2 03/18/21 08:41

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3632616-1 03/18/21 08:59

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1326831-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1326831-09 03/18/21 08:59 • (DUP) R3632616-3 03/18/21 08:59

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.3	83.3	1	1.25		10

Laboratory Control Sample (LCS)

(LCS) R3632616-2 03/18/21 08:59

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

Method Blank (MB)

(MB) R3632393-1 03/18/21 16:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.00330	0.0100

Laboratory Control Sample (LCS)

(LCS) R3632393-2 03/18/21 17:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.0300	0.0288	95.9	80.0-120	

L1326496-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1326496-01 03/18/21 17:07 • (MS) R3632393-3 03/18/21 17:09 • (MSD) R3632393-4 03/18/21 17:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	ND	0.0299	0.0297	99.8	99.1	1	75.0-125			0.738	20

L1327024-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1327024-01 03/18/21 17:13 • (MS) R3632393-5 03/18/21 17:15 • (MSD) R3632393-6 03/18/21 17:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	ND	0.0306	0.0312	102	104	1	75.0-125			1.98	20

Method Blank (MB)

(MB) R3632649-1 03/19/21 08:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.00330	0.0100

Laboratory Control Sample (LCS)

(LCS) R3632649-2 03/19/21 08:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.0300	0.0307	102	80.0-120	

L1326831-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1326831-10 03/19/21 08:23 • (MS) R3632649-3 03/19/21 08:25 • (MSD) R3632649-4 03/19/21 08:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	ND	0.0312	0.0321	104	107	1	75.0-125			2.61	20

Method Blank (MB)

(MB) R3632447-1 03/18/21 16:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.0330	0.100
Barium	U		0.0330	0.100
Cadmium	U		0.0330	0.100
Chromium	U		0.0330	0.100
Lead	U		0.0330	0.100
Selenium	U		0.0330	0.100
Silver	U		0.0330	0.100

Laboratory Control Sample (LCS)

(LCS) R3632447-2 03/18/21 16:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	10.0	9.59	95.9	80.0-120	
Barium	10.0	9.87	98.7	80.0-120	
Cadmium	10.0	9.82	98.2	80.0-120	
Chromium	10.0	9.85	98.5	80.0-120	
Lead	10.0	9.87	98.7	80.0-120	
Selenium	10.0	9.85	98.5	80.0-120	
Silver	2.00	1.87	93.4	80.0-120	

L1326432-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1326432-02 03/18/21 16:43 • (MS) R3632447-4 03/18/21 16:49 • (MSD) R3632447-5 03/18/21 16:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	ND	9.76	9.66	97.6	96.6	1	75.0-125			1.02	20
Barium	10.0	0.751	10.5	10.4	97.4	96.7	1	75.0-125			0.651	20
Cadmium	10.0	ND	9.89	9.86	98.9	98.6	1	75.0-125			0.337	20
Chromium	10.0	ND	9.89	9.70	98.9	97.0	1	75.0-125			1.90	20
Lead	10.0	ND	9.85	9.81	98.5	98.1	1	75.0-125			0.484	20
Selenium	10.0	ND	10.1	9.97	100	98.9	1	75.0-125			1.12	20
Silver	2.00	ND	1.91	1.88	95.3	93.9	1	75.0-125			1.50	20

L1326496-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1326496-01 03/18/21 16:55 • (MS) R3632447-6 03/18/21 16:57 • (MSD) R3632447-7 03/18/21 17:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	ND	9.14	9.23	91.4	92.3	1	75.0-125			0.943	20
Barium	10.0	0.136	9.98	10.0	98.4	98.6	1	75.0-125			0.173	20
Cadmium	10.0	ND	9.59	9.63	95.9	96.3	1	75.0-125			0.405	20
Chromium	10.0	ND	9.65	9.81	96.5	98.1	1	75.0-125			1.67	20
Lead	10.0	ND	9.64	9.70	96.0	96.5	1	75.0-125			0.605	20
Selenium	10.0	ND	9.53	9.51	95.3	95.1	1	75.0-125			0.127	20
Silver	2.00	ND	1.83	1.85	91.3	92.3	1	75.0-125			1.08	20

Method Blank (MB)

(MB) R3632507-1 03/18/21 23:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.0330	0.100
Barium	U		0.0330	0.100
Cadmium	U		0.0330	0.100
Chromium	U		0.0330	0.100
Lead	U		0.0330	0.100
Selenium	U		0.0330	0.100
Silver	U		0.0330	0.100

Laboratory Control Sample (LCS)

(LCS) R3632507-2 03/18/21 23:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	10.0	9.49	94.9	80.0-120	
Barium	10.0	9.83	98.3	80.0-120	
Cadmium	10.0	9.33	93.3	80.0-120	
Chromium	10.0	9.63	96.3	80.0-120	
Lead	10.0	9.68	96.8	80.0-120	
Selenium	10.0	9.98	99.8	80.0-120	
Silver	2.00	1.90	94.9	80.0-120	

L1326831-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1326831-10 03/18/21 23:35 • (MS) R3632507-4 03/18/21 23:40 • (MSD) R3632507-5 03/18/21 23:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	ND	9.61	9.48	96.1	94.8	1	75.0-125			1.38	20
Barium	10.0	1.40	11.2	10.8	98.3	94.4	1	75.0-125			3.51	20
Cadmium	10.0	ND	9.41	9.32	94.1	93.2	1	75.0-125			0.971	20
Chromium	10.0	ND	9.62	9.60	96.2	96.0	1	75.0-125			0.214	20
Lead	10.0	ND	9.76	9.64	97.6	96.4	1	75.0-125			1.19	20
Selenium	10.0	ND	10.1	9.91	101	99.1	1	75.0-125			1.59	20
Silver	2.00	ND	1.90	1.91	95.0	95.3	1	75.0-125			0.299	20

Method Blank (MB)

(MB) R3633531-2 03/22/21 13:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
Carbazole	U		0.0103	0.333
4-Chloroaniline	U		0.0120	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
Dibenzofuran	U		0.0109	0.333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
2-Methylnaphthalene	U		0.00432	0.0333
Naphthalene	U		0.00836	0.0333
2-Nitroaniline	U		0.0107	0.333
3-Nitroaniline	U		0.0106	0.333
4-Nitroaniline	U		0.00971	0.333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333

Method Blank (MB)

(MB) R3633531-2 03/22/21 13:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
Benzoic Acid	U		0.118	1.67
Benzyl Alcohol	U		0.0123	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
(S) Nitrobenzene-d5	*41.1*			*10.0-122*
(S) 2-Fluorobiphenyl	*55.3*			*15.0-120*
(S) p-Terphenyl-d14	*70.3*			*10.0-120*
(S) Phenol-d5	*49.5*			*10.0-120*
(S) 2-Fluorophenol	*55.4*			*12.0-120*
(S) 2,4,6-Tribromophenol	*54.2*			*10.0-127*

Laboratory Control Sample (LCS)

(LCS) R3633531-1 03/22/21 12:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.377	56.6	38.0-120	
Acenaphthylene	0.666	0.399	59.9	40.0-120	

Laboratory Control Sample (LCS)

(LCS) R3633531-1 03/22/21 12:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.666	0.416	62.5	42.0-120	
Benzo(a)anthracene	0.666	0.470	70.6	44.0-120	
Benzo(b)fluoranthene	0.666	0.421	63.2	43.0-120	
Benzo(k)fluoranthene	0.666	0.446	67.0	44.0-120	
Benzo(g,h,i)perylene	0.666	0.487	73.1	43.0-120	
Benzo(a)pyrene	0.666	0.471	70.7	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.269	40.4	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.403	60.5	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.346	52.0	23.0-120	
4-Bromophenyl-phenylether	0.666	0.418	62.8	40.0-120	
Carbazole	0.666	0.408	61.3	48.0-120	
4-Chloroaniline	0.666	0.238	35.7	18.0-120	
2-Chloronaphthalene	0.666	0.379	56.9	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.425	63.8	40.0-120	
Chrysene	0.666	0.448	67.3	43.0-120	
Dibenz(a,h)anthracene	0.666	0.480	72.1	44.0-120	
Dibenzofuran	0.666	0.412	61.9	44.0-120	
3,3-Dichlorobenzidine	1.33	0.865	65.0	28.0-120	
2,4-Dinitrotoluene	0.666	0.456	68.5	45.0-120	
2,6-Dinitrotoluene	0.666	0.445	66.8	42.0-120	
Fluoranthene	0.666	0.414	62.2	44.0-120	
Fluorene	0.666	0.410	61.6	41.0-120	
Hexachlorobenzene	0.666	0.397	59.6	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.340	51.1	15.0-120	
Hexachlorocyclopentadiene	0.666	0.325	48.8	15.0-120	
Hexachloroethane	0.666	0.334	50.2	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.475	71.3	45.0-120	
Isophorone	0.666	0.273	41.0	23.0-120	
2-Methylnaphthalene	0.666	0.315	47.3	34.0-120	
Naphthalene	0.666	0.317	47.6	18.0-120	
2-Nitroaniline	0.666	0.495	74.3	46.0-120	
3-Nitroaniline	0.666	0.450	67.6	36.0-120	
4-Nitroaniline	0.666	0.492	73.9	36.0-120	
Nitrobenzene	0.666	0.266	39.9	17.0-120	
n-Nitrosodimethylamine	0.666	0.314	47.1	10.0-125	
n-Nitrosodiphenylamine	0.666	0.379	56.9	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.320	48.0	26.0-120	
Phenanthrene	0.666	0.421	63.2	42.0-120	
Benzylbutyl phthalate	0.666	0.476	71.5	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.460	69.1	41.0-120	

Laboratory Control Sample (LCS)

(LCS) R3633531-1 03/22/21 12:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Di-n-butyl phthalate	0.666	0.418	62.8	43.0-120	
Diethyl phthalate	0.666	0.452	67.9	43.0-120	
Dimethyl phthalate	0.666	0.423	63.5	43.0-120	
Di-n-octyl phthalate	0.666	0.481	72.2	40.0-120	
Pyrene	0.666	0.438	65.8	41.0-120	
Pyridine	0.666	0.139	20.9	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.335	50.3	17.0-120	
Benzoic Acid	1.33	0.136	10.2	10.0-120	
Benzyl Alcohol	0.666	0.280	42.0	10.0-120	
4-Chloro-3-methylphenol	0.666	0.317	47.6	28.0-120	
2-Chlorophenol	0.666	0.391	58.7	28.0-120	
2-Methylphenol	0.666	0.363	54.5	35.0-120	
3&4-Methyl Phenol	0.666	0.423	63.5	42.0-120	
2,4-Dichlorophenol	0.666	0.336	50.5	25.0-120	
2,4-Dimethylphenol	0.666	0.311	46.7	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.350	52.6	16.0-120	
2,4-Dinitrophenol	0.666	0.216	32.4	10.0-120	
2-Nitrophenol	0.666	0.336	50.5	20.0-120	
4-Nitrophenol	0.666	0.422	63.4	27.0-120	
Pentachlorophenol	0.666	0.326	48.9	29.0-120	
Phenol	0.666	0.336	50.5	28.0-120	
2,4,5-Trichlorophenol	0.666	0.398	59.8	38.0-120	
2,4,6-Trichlorophenol	0.666	0.404	60.7	37.0-120	
(S) Nitrobenzene-d5			*37.8*	*10.0-122*	
(S) 2-Fluorobiphenyl			*58.3*	*15.0-120*	
(S) p-Terphenyl-d14			*65.8*	*10.0-120*	
(S) Phenol-d5			*54.1*	*10.0-120*	
(S) 2-Fluorophenol			*58.4*	*12.0-120*	
(S) 2,4,6-Tribromophenol			*66.1*	*10.0-127*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to:
Patrick Marty

Email To:
Patrick_marty@golder.com;Blake_Sokora@gold

Project Description:
Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected:

Please Circle: PT MT CT ET

Phone: **512-671-3434**

Client Project #
1712

Lab Project #
UPRRGOLD-1712

Collected by (print):
WL, BS

Site/Facility ID #
SOIL EVALUATION

P.O. #
4300066026

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8oz Clr-NoPres - Hold	SV8270 8oz Clr-NoPres - Total	TCLP Metals								Remarks	Sample # (lab only)
SO-1712-CA06(0-5)-20210312		SS	0-5	3/12/21	1050	1	X	X	X								Hold	-01/-02
SO-1712-CA01(0-5)-20210312		SS	0-5	3/12/21	1230	1	X	X	X								Total	-03/-04
SO-1712-CA06(5-8)-20210312		SS	5-8	3/12/21	1055	1	X	X	X								Metals	-05/-06
SO-1712-CA01(5-8)-20210312		SS	5-8	3/12/21	1235	1	X	X	X									-07/-08
SO-1712-CA03(0-1.5)-20210312		SS	0-1.5	3/12/21	1430	1	X	X	X									-09/-10
SO-1712-CA03(1.5-1.67)-20210312		SS	1.5-1.67	3/12/21	1435	1	X	X	X									-11-12
SO-1712-CA02(0-2.0)-20210312		SS	0-2.0	3/12/21	1005	1	X	X	X									-13-14
SO-1712-CA04(1.5-1.62)-20210312		SS	1.5-1.62	3/12/21	1505	1	X	X	X									-15-16
SO-1712-CA05(0-2)-20210312		SS	0-2	3/12/21	1040	1	X	X	X									-17-18
SO-1712-CA04(0-1.5)-20210312		SS	0-1.5	3/12/21	1500	1	X	X	X									-19-20

Chain of Custody Page 1 of 1

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # U326831
D139

Acctnum: **UPRRGOLD**
Template: **T183275**
Prelogin: **P833433**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7846 9464 9854

Sample Receipt Checklist
COC Seal Present/Intact: ✓ NP __Y __N
COC Signed/Accurate: ✓ __Y __N
Bottles arrive intact: ✓ __Y __N
Correct bottles used: ✓ __Y __N
Sufficient volume sent: ✓ __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓ __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
	3/12/21	1700			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.3+0.2=0.3 °C Bottles Received: 10	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 3/13/21 Time: 9:00	Hold: Condition: NCF / (OK)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 17, 2021

Revised Report

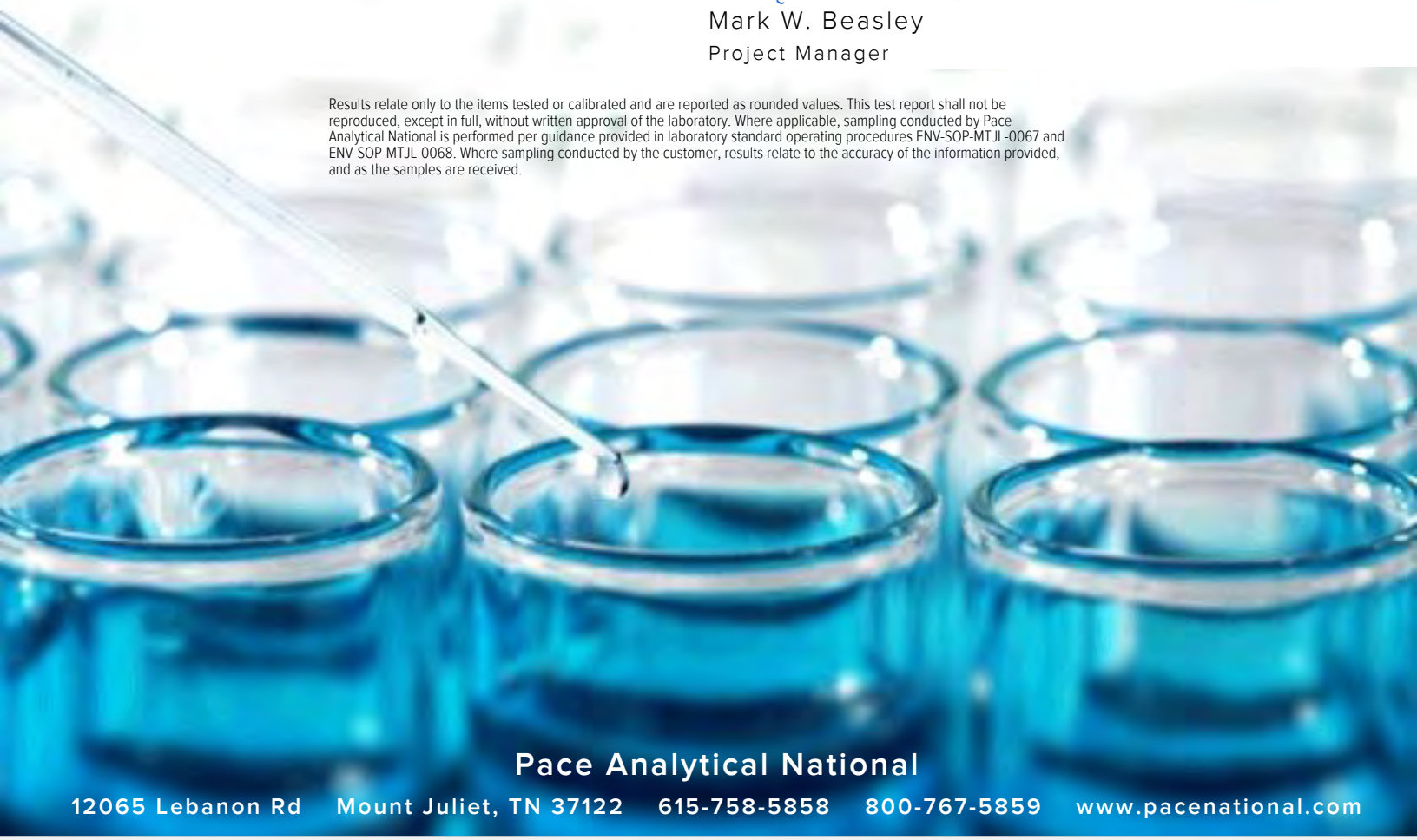
UPRR - Golder Associates

Sample Delivery Group:	L1313723
Samples Received:	01/28/2021
Project Number:	1712
Description:	Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North
Site:	SOIL EVALUATION
Report To:	Patrick Marty
	2201 Double Creek Dr., Ste 4004
	Round Rock, TX 78664

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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Cn: Case Narrative 9
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SO-1712-SE06(0-1.25)-20210126 L1313723-01 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 16:40 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 17:54	EL	Mt. Juliet, TN

SO-1712-SE03(0-2-20210 L1313723-02 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 14:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:05	EL	Mt. Juliet, TN

SO-1712-SE03(0-2-20210 L1313723-03 GW

Collected by: JE/WC | Collected date/time: 01/26/21 14:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 13:44	EL	Mt. Juliet, TN

SO-1712-SE13(0-0.5)-20210126 L1313723-04 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 10:15 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:08	EL	Mt. Juliet, TN

SO-1712-SE11(0-1)-20210126 L1313723-05 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 09:50 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:11	EL	Mt. Juliet, TN

SO-1712-SE11(0-1)-20210126 L1313723-06 GW

Collected by: JE/WC | Collected date/time: 01/26/21 09:50 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 13:47	EL	Mt. Juliet, TN

SO-1712-SE05(0-1)-20210126 L1313723-07 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 15:45 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:13	EL	Mt. Juliet, TN

SO-1712-SE08(0-2)-20210126 L1313723-08 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 11:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:22	EL	Mt. Juliet, TN

SO-1712-SE12(0-0.5)-20210126 L1313723-09 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 10:00 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:24	EL	Mt. Juliet, TN

SO-1712-SE12(0-0.5)-20210126 L1313723-10 GW

Collected by: JE/WC | Collected date/time: 01/26/21 10:00 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	5	02/08/21 11:53	02/08/21 14:30	EL	Mt. Juliet, TN

SO-1712-SE10(0-0.5)-20210126 L1313723-11 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 10:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:27	EL	Mt. Juliet, TN

SO-1712-SE10(0-0.5)-20210126 L1313723-12 GW

Collected by: JE/WC | Collected date/time: 01/26/21 10:35 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 13:58	EL	Mt. Juliet, TN

SO-1712-SE09(0-0.5)-20210126 L1313723-13 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 11:10 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:30	EL	Mt. Juliet, TN

SO-1712-SE09(0-0.5)-20210126 L1313723-14 GW

Collected by: JE/WC | Collected date/time: 01/26/21 11:10 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 14:01	EL	Mt. Juliet, TN

SO-1712-SE04(0-0.5)-20210126 L1313723-15 Waste

Collected by: JE/WC | Collected date/time: 01/26/21 15:15 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:33	EL	Mt. Juliet, TN

SO-1712-SE04(0-0.5)-20210126 L1313723-16 GW

Collected by: JE/WC | Collected date/time: 01/26/21 15:15 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 13:28	EL	Mt. Juliet, TN

SO-1712-SE24(0-1)-20210127 L1313723-17 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 13:20 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:36	EL	Mt. Juliet, TN

SO-1712-SE24(0-1)-20210127 L1313723-18 GW

Collected by: JE/WC | Collected date/time: 01/27/21 13:20 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 14:04	EL	Mt. Juliet, TN

SO-1712-SE22(0-2)-20210127 L1313723-19 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 12:30 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:39	EL	Mt. Juliet, TN

SO-1712-SE20(0-0.5)-20210127 L1313723-20 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 11:00 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:41	EL	Mt. Juliet, TN

SO-1712-SE20(0-0.5)-20210127 L1313723-21 GW

Collected by: JE/WC | Collected date/time: 01/27/21 11:00 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 14:07	EL	Mt. Juliet, TN

SO-1712-SE21(0-0.5)-20210127 L1313723-22 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 11:10 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:44	EL	Mt. Juliet, TN

SO-1712-SE21(0-0.5)-20210127 L1313723-23 GW

Collected by: JE/WC | Collected date/time: 01/27/21 11:10 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 14:09	EL	Mt. Juliet, TN

SO-1712-SE15(0-0.5)-20210127 L1313723-24 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 08:55 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:47	EL	Mt. Juliet, TN

SO-1712-SE15(0-0.5)-20210127 L1313723-25 GW

Collected by: JE/WC | Collected date/time: 01/27/21 08:55 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 14:12	EL	Mt. Juliet, TN

SO-1712-SE19(0-1)-20210127 L1313723-26 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 09:55 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:55	EL	Mt. Juliet, TN

SO-1712-SE23(0-0.5)-20210127 L1313723-27 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 12:40 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 18:58	JDG	Mt. Juliet, TN

SO-1712-SE16(0-0.5)-20210127 L1313723-28 Waste

Collected by: JE/WC | Collected date/time: 01/27/21 09:05 | Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 19:01	EL	Mt. Juliet, TN

SO-1712-SE16(0-0.5)-20210127 L1313723-29 GW

Collected by: JE/WC
Collected date/time: 01/27/21 09:05
Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1312	WG1617031	1	02/05/21 12:07	02/05/21 12:07	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1618056	1	02/08/21 11:53	02/08/21 14:15	EL	Mt. Juliet, TN

SO-1712-SE18(0-1.25)-20210127 L1313723-30 Waste

Collected by: JE/WC
Collected date/time: 01/27/21 09:40
Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 19:04	EL	Mt. Juliet, TN

SO-1712-SE17(0-0.5)-20210127 L1313723-31 Waste

Collected by: JE/WC
Collected date/time: 01/27/21 09:10
Received date/time: 01/28/21 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1616839	1	02/05/21 08:50	02/05/21 08:50	TM	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1617789	1	02/07/21 21:49	02/08/21 19:07	EL	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Report Revision History

Level II Report - Version 1: 02/09/21 10:45
Level II Report - Version 2: 02/12/21 13:01

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

R1 - Field chain-of-custody documentation;

R2 - Sample identification cross-reference;

R3 - Test reports (analytical data sheets) for each environmental sample that includes:

a. Items consistent with NELAC Chapter 5,

b. dilution factors,

c. preparation methods,

d. cleanup methods, and

e. if required for the project, tentatively identified compounds (TICs).

R4 - Surrogate recovery data including:

a. Calculated recovery (%R), and

b. The laboratory's surrogate QC limits.

R5 - Test reports/summary forms for blank samples;

R6 - Test reports/summary forms for laboratory control samples (LCSs) including:

a. LCS spiking amounts,

b. Calculated %R for each analyte, and

c. The laboratory's LCS QC limits.

R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

a. Samples associated with the MS/MSD clearly identified,

b. MS/MSD spiking amounts,

c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,

d. Calculated %Rs and relative percent differences (RPDs), and

e. The laboratory's MS/MSD QC limits

R8 - Laboratory analytical duplicate (if applicable) recovery and precision:

a. The amount of analyte measured in the duplicate,

b. The calculated RPD, and

c. The laboratory's QC limits for analytical duplicates.

R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.

R10 - Other problems or anomalies.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Mark W. Beasley
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National	LRC Date: 02/17/2021 16:48
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1313723-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 and 31
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1618056, WG1617789, WG1616839 and WG1617031

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National	LRC Date: 02/17/2021 16:48
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1313723-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 and 31
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1618056, WG1617789, WG1616839 and WG1617031

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?			X		
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 02/17/2021 16:48
Project Name: Houston TX-Houston Subd. MP358.2-360.3 Englewood Yard North	Laboratory Job Number: L1313723-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 and 31
Reviewer Name: Mark W. Beasley	Prep Batch Number(s): WG1618056, WG1617789, WG1616839 and WG1617031

ER #[1]	Description
	The Exception Report intentionally left blank, there are no exceptions applied to this SDG.

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.21		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.77		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	02/08/2021 17:54	WG1617789
Lead	ND		0.100	5	1	02/08/2021 17:54	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.77		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.95		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:05	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	7.99		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Lead	0.0571		0.00299	0.00600	0.00600	1	02/08/2021 13:44	WG1618056
Silver	U		0.00154	0.00500	0.00500	1	02/08/2021 13:44	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	7.66		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.51		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	02/08/2021 18:08	WG1617789
Lead	ND		0.100	5	1	02/08/2021 18:08	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	9.02		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.17		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:11	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.13		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Lead	0.219		0.00299	0.00600	0.00600	1	02/08/2021 13:47	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.67		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.82		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:13	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.31		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.00		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:22	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.55		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.78		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:24	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.39		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Lead	0.888		0.0150	0.00600	0.0300	5	02/08/2021 14:30	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.06		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.62		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:27	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	7.93		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Cadmium	0.00128	J	0.000479	0.00200	0.00200	1	02/08/2021 13:58	WG1618056
Lead	0.135		0.00299	0.00600	0.00600	1	02/08/2021 13:58	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.29		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.62		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:30	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	7.85		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Arsenic	0.0186		0.00440	0.0100	0.0100	1	02/08/2021 14:01	WG1618056
Lead	0.140		0.00299	0.00600	0.00600	1	02/08/2021 14:01	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.93		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.06		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:33	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.38		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Silver	U		0.00154	0.00500	0.00500	1	02/08/2021 13:28	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.86		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.19		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:36	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.42		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Lead	0.0976		0.00299	0.00600	0.00600	1	02/08/2021 14:04	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.74		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.07		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:39	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.35		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.04		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:41	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.08		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Arsenic	0.0221		0.00440	0.0100	0.0100	1	02/08/2021 14:07	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.87		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.07		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:44	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.28		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Arsenic	0.0371		0.00440	0.0100	0.0100	1	02/08/2021 14:09	WG1618056
Selenium	U		0.00735	0.0100	0.0100	1	02/08/2021 14:09	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.76		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.09		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 18:47	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.12		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Arsenic	0.0368		0.00440	0.0100	0.0100	1	02/08/2021 14:12	WG1618056
Barium	0.247		0.000736	0.00500	0.00500	1	02/08/2021 14:12	WG1618056
Lead	0.100		0.00299	0.00600	0.00600	1	02/08/2021 14:12	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.53		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.04		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	02/08/2021 18:55	WG1617789
Lead	ND		0.100	5	1	02/08/2021 18:55	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.69		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.11		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	02/08/2021 18:58	WG1617789
Lead	ND		0.100	5	1	02/08/2021 18:58	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.58		2/5/2021 8:50:35 AM	WG1616839
Final pH	6.03		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 19:01	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
SPLP Extraction	-		2/5/2021 12:07:18 PM	WG1617031
Fluid	2		2/5/2021 12:07:18 PM	WG1617031
Final pH	8.70		2/5/2021 12:07:18 PM	WG1617031

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Arsenic	0.0250		0.00440	0.0100	0.0100	1	02/08/2021 14:15	WG1618056
Barium	0.199		0.000736	0.00500	0.00500	1	02/08/2021 14:15	WG1618056

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.49		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.48		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Lead	ND		0.100	5	1	02/08/2021 19:04	WG1617789

Preparation by Method 1311/1312

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/5/2021 8:50:35 AM	WG1616839
Fluid	1		2/5/2021 8:50:35 AM	WG1616839
Initial pH	8.62		2/5/2021 8:50:35 AM	WG1616839
Final pH	5.93		2/5/2021 8:50:35 AM	WG1616839

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MQL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.100	5	1	02/08/2021 19:07	WG1617789
Lead	ND		0.100	5	1	02/08/2021 19:07	WG1617789

Method Blank (MB)

(MB) R3620572-1 02/08/21 17:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.0330	0.100
Lead	U		0.0330	0.100

Laboratory Control Sample (LCS)

(LCS) R3620572-2 02/08/21 17:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	10.0	9.69	96.9	80.0-120	
Lead	10.0	9.94	99.4	80.0-120	

L1313723-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1313723-01 02/08/21 17:54 • (MS) R3620572-4 02/08/21 17:59 • (MSD) R3620572-5 02/08/21 18:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	ND	9.77	9.76	97.7	97.6	1	75.0-125			0.152	20
Lead	10.0	ND	9.90	9.94	98.6	99.0	1	75.0-125			0.408	20

Method Blank (MB)

(MB) R3620458-1 02/08/21 13:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Arsenic	U		0.00440	0.0100
Barium	U		0.000736	0.00500
Cadmium	U		0.000479	0.00200
Lead	U		0.00299	0.00600
Selenium	U		0.00735	0.0100
Silver	U		0.00154	0.00500

Laboratory Control Sample (LCS)

(LCS) R3620458-2 02/08/21 13:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	1.00	0.979	97.9	80.0-120	
Barium	1.00	0.993	99.3	80.0-120	
Cadmium	1.00	0.967	96.7	80.0-120	
Lead	1.00	0.995	99.5	80.0-120	
Selenium	1.00	0.962	96.2	80.0-120	
Silver	0.200	0.171	85.3	80.0-120	

L1313723-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1313723-16 02/08/21 13:28 • (MS) R3620458-4 02/08/21 13:34 • (MSD) R3620458-5 02/08/21 13:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1.00	U	0.973	0.965	97.3	96.5	1	75.0-125			0.820	20
Barium	1.00	0.0853	1.07	1.05	98.1	96.2	1	75.0-125			1.85	20
Cadmium	1.00	0.000726	0.968	0.955	96.7	95.4	1	75.0-125			1.39	20
Lead	1.00	0.0281	1.03	1.02	100	99.3	1	75.0-125			0.977	20
Selenium	1.00	U	0.973	0.960	97.3	96.0	1	75.0-125			1.34	20
Silver	0.200	U	0.170	0.168	85.0	84.0	1	75.0-125			1.25	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN, 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical National 1313 Point Mallard Parkway SE Suite B Decatur, AL, 35601

Alabama	40160
ANSI National Accreditation Board	L2239

Pace Analytical National 660 Bercut Dr. Ste. C Sacramento, CA, 95811

California	2961	Oregon	CA300002
Minnesota	006-999-465	Washington	C926
North Dakota	R-214		

Pace Analytical National 6000 South Eastern Avenue Ste 9A Las Vegas, NV, 89119

Nevada	NV009412021-1

Pace Analytical National 1606 E. Brazos Street Suite D Victoria, TX, 77901

Texas	T104704328-20-18

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to: Patrick Marty

Email To: Patrick_marty@golder.com;Jacqueline_Engel@g

Project Description: Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected: HOUSTON, TX

Please Circle: PT MT CT ET

Phone: 512-671-3434

Client Project # 1712

Lab Project # UPRRGOLD-1712

Collected by (print): JACQUELINE ENGEL & WILL CARTER

Site/Facility ID # SOIL EVALUATION

P.O. # 4300066026

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8ozClr-NoPres	PH 8ozClr-NoPres	SV8270 8ozClr-NoPres	TPHTX 40mlTW/SyringeNoPres	V8260 40mlAmb/MeOH10ml/Syr					Remarks	Sample # (lab only)
SO-1712-SE06(0-1.25)-2021 0126	G	SS	1.25	1/26/21	1640	4	✓	✓	✓	✓	✓					01	-01
SO-1712-SE02(0-3)-2021 0126	G	SS	3		1415	4	✓		✓	✓	✓						-02
SO-1712-SE03(0-2)-2021 0126	G	SS	2		1435	4	✓		✓	✓	✓					02/03	-03
SO-1712-SE01(0-3)-2021 0126	G	SS	3		1345	4	✓		✓	✓	✓						-04
SO-1712-SE13(0-0.5)-2021 0126	G	SS	0.5		1015	4	✓	✓	✓	✓	✓					04	-05
SO-1712-SE07(0-4)-2021 0126	G	SS	4		1205	4	✓		✓	✓	✓						-06
SO-1712-SE11(0-1)-2021 0126	G	SS	1		0950	4	✓		✓	✓	✓					05/06	-07
SO-1712-SE05(0-1)-2021 0126	G	SS	1		1545	4	✓	✓	✓	✓	✓					07	-08
SO-1712-SE08(0-2)-2021 0126	G	SS	2		1135	4	✓		✓	✓	✓					08	-09
SO-1712-SE12(0-0.5)-2021 0126	G	SS	0.5	↓	1000	4	✓		✓	✓	✓					09/10	-10

Chain of Custody Page 1 of 3

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # L1311799 pu 2/4

C203

Acctnum: UPRRGOLD

Template: T180684 1/13/21

Prelogin: P822407

PM: 134 - Mark W. Beasley

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: WOS2247
STANDARD TAT
UPRR ENG Dept.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by: (Signature)	Date: 1/27/21	Time: 16:42	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Relinquished by: (Signature)	Date: 1/27/21	Time: 18:00	Received by: (Signature)	Temp: 1.3 1.5 °C Bottles Received: 96	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/28/21 Time: 8:00	Hold: Condition: NCF / OK

UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to: Patrick Marty

Email To: Patrick_marty@golder.com;Jacqueline_Engel@g

Project Description: Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected: HOUSTON, TX

Please Circle: PT MT CT ET

Phone: 512-671-3434

Client Project # 1712

Lab Project # UPRRGOLD-1712

Collected by (print): JACQUELINE ENGEL & WILL CARTER

Site/Facility ID # SOIL EVALUATION

P.O. # 4300066026

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ✓

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8ozClr-NoPres	PH 8ozClr-NoPres	SV8270 8ozClr-NoPres	TPHTX 40mlTW/SyringeNoPres	V8260 40mlAmb/MeOH10ml/Syr					Remarks	Sample # (lab only)
SO-1712-SE10(0-0.5)-20210126	G	SS	0.5	1/26/21	1035	4	✓	✓	✓	✓	✓					11/12	-11
SO-1712-SE09(0-0.5)-20210126	G	SS	0.5	↓	1110	4	✓		✓	✓	✓					13/14	-12
SO-1712-SE04(0-0.5)-20210126	G	SS	0.5	↓	1515	4	✓		✓	✓	✓					15/16	-13
SO-1712-SE24(0-1)-20210127	G	SS	1	1/27/21	1320	4	✓	✓	✓	✓	✓					17/18	-14
SO-1712-SE22(0-2)-20210127	G	SS	2	↓	1230	4	✓		✓	✓	✓					19	-15
SO-1712-SE20(0-0.5)-20210127	G	SS	0.5		1100	4	✓		✓	✓	✓					20/21	-16
SO-1712-SE21(0-0.5)-20210127	G	SS	0.5		1110	4	✓	✓	✓	✓	✓					22/23	-17
SO-1712-SE15(0-0.5)-20210127	G	SS	0.5		0855	4	✓		✓	✓	✓					24/25	-18
SO-1712-SE19(0-1)-20210127	G	SS	1		0955	4	✓		✓	✓	✓					26	-19
SO-1712-SE23(0-0.5)-20210127	G	SS	0.5	↓	1240	4	✓		✓	✓	✓					27	-20

Chain of Custody Page 2 of 3

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # L1311179 pg 2/4

Table # 713723

Acctnum: UPRRGOLD

Template: T180684

Prelogin: P822407

PM: 134 - Mark W. Beasley

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: WO52247
UPRR ENG DEPT.
STANDARD TAT

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: X NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	If preservation required by Login: Date/Time
	1/27/21	16:42		2	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: AT 1.3 IR 1.5 +.2 °C	Bottles Received: 96
	1/27/21	18:00			
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/28/21	Time: 8:00
				Hold:	Condition: NCF / OK

UPRR - Golder Associates

2201 Double Creek Dr., Ste 4004
Round Rock, TX 78664

Billing Information:
Jim Brannen
4823 N 119th Street
Milwaukee, WI 53225

Pres Chk

Report to: Patrick Marty

Email To: Patrick_marty@golder.com;Jacqueline_Engel@g

Project Description: Houston TX-Houston Subd. MP358.2-360.3 Englewood

City/State Collected: HOUSTON, TX

Please Circle: PT MT CT ET

Phone: 512-671-3434

Client Project # 1712

Lab Project # UPRRGOLD-1712

Collected by (print): JACQUELINE ENGEL + WILL CARTER

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Site/Facility ID # SOIL EVALUATION

P.O. # 4300066026

Quote #

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	MRCRA8 8oz Clr-NoPres	PH 8oz Clr-NoPres	SV8270 8oz Clr-NoPres	TPHTX 40ml TW/SyringeNoPres	V8260 40ml Amb/MeOH 10ml/Syr						Remarks	Sample # (lab only)
SO-1712-SE14 (0-0.5) 20210127	G	SS	0.5	1/27/21	0845	4	✓		✓	✓	✓							-21
SO-1712-SE16 (0-0.5) - 20210127	G	SS	0.5		0905	4	✓		✓	✓	✓						28/29	-22
SO-1712-SE18 (0-1.25) - 20210127	G	SS	1.25		0940	4	✓	✓	✓	✓	✓						30	-23
SO-1712-SE17 (0-0.5) - 20210127	G	SS	0.5		0910	4	✓		✓	✓	✓						31	-24
~~TRIP BLANK 01/26~~		~~SS~~																
TB01-20210127	G	~~SS~~ OT	-	1/27/21	-	1					✓							-25
TB02-20210126	G	OT	-	1/26/21	-	1					✓							-26

Chain of Custody Page 3 of 3

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # L1311794 1/28/21

Table # 1313723

Acctnum: UPRRGOLD

Template: T180684

Prelogin: P822407

PM: 134 - Mark W. Beasley

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: WO52247
UPRR ENG. DEPT.
STANDARD TAT

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	X NP	Y N
COC Signed/Accurate:	✓	Y N
Bottles arrive intact:	✓	Y N
Correct bottles used:	✓	Y N
Sufficient volume sent:	✓	Y N
If Applicable		
VOA Zero Headspace:	✓	Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:	✓	Y N

	Date:	Time:		
Relinquished by: (Signature)	1/27/21	16:42	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR 2
Relinquished by: (Signature)	1/27/21	18:00	Received by: (Signature)	Temp: 1.2 °C 1.3 1.5 Bottles Received: 96
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/28/21 Time: 8:00

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

L1311179 *UPRRGOLD* rush R4 relog

R3/R4/RX/EX

Relog the following as R4 due 2/9:

L1311179-01 TCLP ASICP, PBICP

L1311179-03 TCLP PBICP / SPLP AGICP, PBICP

L1311179-05 TCLP ASICP, PBICP

L1311179-07 TCLP PBICP / SPLP PBICP

L1311179-08 TCLP PBICP

L1311179-09 TCLP PBICP

L1311179-10 TCLP PBICP / SPLP PBICP

L1311179-11 TCLP PBICP / SPLP CDICP, PBICP

L1311179-12 TCLP PBICP / SPLP ASICP, PBICP

L1311179-13 TCLP PBICP / SPLP AGICP

L1311179-14 TCLP PBICP / SPLP PBICP

L1311179-15 TCLP PBICP

L1311179-16 TCLP PBICP / SPLP ASICP

L1311179-17 TCLP PBICP / SPLP ASICP, SEICP

L1311179-18 TCLP PBICP / SPLP ASICP, BAICP, PBICP

L1311179-19 TCLP ASICP, PBICP

L1311179-20 TCLP PBICP

L1311179-22 TCLP PBICP / SPLP ASICP, BAICP

L1311179-23 TCLP PBICP

L1311179-24 TCLP ASICP, PBICP

Thanks

Mark

From: Reid, Anthony <Anthony_Reid@golder.com>

Sent: Thursday, February 04, 2021 10:25 AM

To: Mark Beasley <MBeasley@pacenational.com>

Cc: Marty, Patrick <Patrick_Marty@golder.com>

Subject: Englewood Yard NB - Additional Analysis

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Mark,