Remedial Action Work Plan

1827 Fillmore Avenue Site
BCP Site No. C915279
Buffalo, New York

May 2019 B0421-017-001

Prepared For:

1827 Fillmore LLC

Prepared By:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

In Association With:

TURNKEY ENVIRONMENTAL RESTORATION, LLC

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Prepared for:

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Certification

I, Thomas H. Forbes, certify that I am currently a NYS registered professional engineer and that this April 2019 Remedial Action Work Plan (RAWP) for the 1827 Fillmore Avenue Site (C915279) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

SEAL 

5-1-19

Date

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1.0 INTRODUCTION

Benchmark Environmental Engineering and Science, PLLC (Benchmark), in association with TurnKey Environmental Restoration, LLC (TurnKey), referred to herein as Benchmark-TurnKey, has prepared this Remedial Action Work Plan (RAWP) on behalf of 1827 Fillmore LLC to present the proposed scope of work and implementation procedures for completion of remedial activities at the 1827 Fillmore Avenue Site, Brownfield Cleanup Program (BCP) Site C915279, located at 1827 Fillmore Avenue, Buffalo, New York (Site).

The remedial activities will be completed by 1827 Fillmore LLC, and their designated remedial contractors and subcontractors, with oversight provided by Benchmark-TurnKey. The work will be completed in accordance with 6NYCRR Part 375 and New York State Department of Environmental Conservation (NYSDEC) DER-10 guidelines.

1.1 Background and History

The BCP property located at 1827 Fillmore Avenue (Tax ID No. 90.13-1-11) is situated in a residential, commercial and industrial zoned area of the City of Buffalo, Erie County, New York and consists of one parcel measuring 17.15 acres (see Figures 1 and 2). The Site is currently vacant land with green areas, asphalt paved areas and former roadways. One seven-story brick building that was historically used residentially as part of the Kensington Heights Towers Apartments was recently demolished in October 2018. Five similar buildings that were also a part of the Kensington Heights Towers Apartments were demolished in approximately 2012.

Prior to development of the Kensington Heights Towers in 1958, the Site was used as a stone quarry from at least 1917 through at least 1927. Sometime between the 1940s and 1950s, the stone quarry was backfilled with unknown fill materials. The Site has been vacant since the 1980s.

1.2 Summary of Environmental Conditions

Benchmark-TurnKey completed and submitted to NYSDEC a Remedial Investigation Alternatives Analysis Report (RI/AA), dated January 2019, on behalf of 1827 Fillmore LLC. The public comment period ended on March 22, 2019 and the Decision Document was issued on March 27, 2019. The RI/AA report included a detailed review of previous studies completed by others. The RI was completed in accordance with the

approved RI Work Plan dated November 2017 and three supplemental approved Work Plans dated February 13, 2018, April 23, 2018 and June 18, 2018.

The purpose of the RI was to define the nature and extent of contamination on the BCP Site, and to collect data of sufficient quantity and quality to perform the remedial alternatives evaluation. The RI was completed across the BCP Site to supplement previous environmental data and to delineate or identify areas requiring remediation. On-site field activities included soil boring advancement; test pit excavations (across the Site and within two soil/fill mounds); surface soil/fill sampling; overburden and bedrock monitoring well installation; and groundwater quality sample collection.

Based on the data and analyses obtained during the RI and a historic Phase II by others, the following environmental conditions exist at the Site:

1.2.1 Geology

- Fill with sand, gravel, cinders, ash and/or other non-native materials, which are ubiquitous across the Site in overburden soils and range in thickness from grade to bedrock encountered at varying depths across the Site. A layer of weathered concrete was noted in former building locations at depths ranging between 1 foot below ground surface (fbgs) and 3.5 fbgs.
- Bedrock was encountered at 16 RI investigation locations at varying depths across the Site with ranges between 3 and 24 fbgs.
- The two soil mounds consist mainly of topsoil with reworked sandy clay and minimal fill.

1.2.2 Hydrogeology

The water table in the central and eastern portions of the Site was observed during drilling between 14 fbgs and 18 fbgs, typically within an ash fill layer. No evidence of overburden groundwater was encountered on the western portion of the Site at MW-1, MW-2 and MW-3. As requested by the NYSDEC, due to the lack of overburden groundwater, bedrock wells were installed at MW-1, MW-2 and MW-3 for groundwater sampling purposes. MW-4 was dry at the time of development and sampling and MW-4 remained dry when checked during supplemental RI activities thus MW-4 could not be sampled. Groundwater at the Site generally flows in a westerly direction.

1.2.3 Contamination

1.2.3.1 Surface Soil/Fill

Surface soil/fill is impacted by polycyclic aromatic hydrocarbons (PAHs) with individual PAH concentrations exceeding Commercial Soil Cleanup Objectives (CSCOs) at 12 of 15 surface soil/fill sample locations. The highest total PAH concentration was 818 milligrams per kilogram (mg/kg) at SS-13 collected in a former building location. Total PAHs exceeding 500 mg/kg were not identified at the other surface soil sample locations. Semi-volatile organic compound (SVOC) tentatively identified compounds (TICs) were either non-detect or at minimal concentrations. No metals or pesticides were identified at concentrations exceeding Part 375 CSCOs. Supplemental RI activities were completed in the SS-13 area, as further described below.

Herbicides and polychlorinated biphenyls (PCBs) were non-detect.

1.2.3.2 Subsurface Soil/Fill

Odors and elevated photoionization detector (PID) readings were identified during the RI at TP-8, TP-9, TP-23 and MW-8. The highest PID reading of 276 parts per million (ppm) along with unknown odors were identified at TP-9 at 10 to 12 fbgs. The highest PID reading identified during the 2012 Phase II was 37.6 ppm at SB-43. No olfactory concerns were identified during the 2012 Phase II. Volatile organic compounds (VOCs) were either non-detect or at concentrations significantly below CSCOs in fill samples collected as part of the historic Phase II and RI activities completed at the Site.

The highest total PAH concentration identified from the RI, including supplemental delineation activities, was 935 mg/kg at TP-25 (0-2') collected proximate to a former building and SS-13, collected southeast of TP-25, also in the former building location. Total PAH concentrations in the 2012 Phase II samples and the other RI sample locations were less than 500 mg/kg. NYSDEC's CP-51 Soil Cleanup Policy has provided 500 mg/kg as an alternative soil cleanup objective (i.e., in lieu of individual SCOs) for soils where end use of the Site will be for commercial or industrial purposes where a cover system will be placed and a Site Management Plan will be implemented. Individual PAHs exceed their respective CSCOs in fill samples collected from across the Site; however, the only area with total PAH concentrations exceeding 500 mg/kg is at the TP-25/SS-13 area.

The highest total lead concentrations from the RI and 2012 Phase II were 8,400 mg/kg at MW-6 (8-10') and 21,800 mg/kg at SB-21 (12-16'), respectively. Due to elevated

total lead concentrations, certain fill samples from the RI and supplemental RI activities were further analyzed for Toxicity Characteristic Leaching Procedure (TCLP) lead. TCLP lead exceeding its respective characteristic hazardous waste threshold of 5 milligrams per liter (mg/L) was identified at TP-13 (10-15') and supplemental investigation locations TP-13R (15-17') and TP-13-1 (10-15'). Supplemental fill samples collected in the SB-21 area due to the total lead concentration of 21,800 mg/kg exhibit TCLP lead concentrations above the characteristic hazardous waste threshold at SB-21-4 (12-16'), SB-21-7 (12-16') and SB-21-8 (12-16'). Fill samples from across the Site at MW-2, MW-4, WW-6, TP-1, TP-8 and TP-9 did not exceed the characteristic hazardous waste threshold; therefore, characteristic hazardous lead is limited in extent and is localized in the TP-13 and SB-21 areas.

The highest arsenic concentration identified during the work was 73 mg/kg at historic boring SB-41 (8-11'). However, supplemental arsenic sampling completed in the SB-41 area, including resampling of SB-41 (8-11') where the concentration of 73 mg/kg was previously identified by others, indicate arsenic concentrations below its respective unrestricted SCO (USCO) or CSCO. Additional metals exceeding CSCOs from the RI included copper and mercury at TP-8 (6-9') and barium at TP-9 (10-12') and MW-8 (14-16'). Barium, cadmium and copper exceeded CSCOs during the 2012 Phase II. The concentrations of arsenic, copper, mercury, barium, cadmium and copper are not considered significant and will be addressed by a cover system and Site Management Plan.

No pesticides, herbicides or PCBs exceeded CSCOs.

1.2.3.3 Groundwater

One VOC, 4-isopropyltoluene, was detected in one overburden well (MW-8) at a concentration of 9.3 micrograms per liter (ug/L), which slightly exceeds its Groundwater Quality Standards/Guidance Values (GWQS/GV) of 5.0 ug/L. SVOCs, pesticides, herbicides and PCBs were either non-detect or at concentrations below GWQS/GV. Dissolved metals were non-detect or below GWQS/GV except for naturally occurring minerals manganese and sodium.

Low level estimated concentrations of per- and polyfluoroalkyl substances (PFAs) were detected in the overburden groundwater samples collected from groundwater wells MW-7 and MW-8.

The non-descript odors identified during overburden well development and sampling activities do not appear to be associated with groundwater impacts.

As previously indicated, overburden groundwater generally flows in a westerly direction.

1.2.3.4 Contamination Summary/Hot Spots

While fill materials with elevated PAHs and metals above CSCOs were identified across the Site, four distinct "hot spots" were identified and designated: TP-13 Lead Area, SB-21 Lead Area, MW-6 Lead Area, and the TP-25/SS-13 PAH area, as further described below:

- TP-13 Lead Area – located on the northern portion of the Site, characteristic hazardous lead concentrations between 8 mg/L and 12.7 mg/L were identified at depths ranging between 10 fbgs and 17 fbgs.
- SB-21 Lead Area – located on the eastern portion of the Site, characteristic hazardous lead concentrations between 5.3 mg/L and 22.7 mg/L were identified at depths ranging between 12 fbgs and 16 fbgs. Relatively high total lead concentrations (6,545 mg/kg and 21,800 mg/kg) were identified in soil immediately surrounding sample location SB-21.
- MW-6 Lead Area – located on the northern portion of the Site, a relatively high total lead concentration of 8,400 mg/kg at 8 fbgs to 10 fbgs. The TCLP lead concentration of this sample (0.057 mg/L) was significantly below the characteristic hazardous waste threshold (5 mg/L).
- TP-25/SS-13 PAH Area – located on the southeastern portion of the Site, total PAH concentrations exceeding the threshold of 500 mg/kg were identified at TP-25 (935 mg/kg) and SS-13 (818 mg/kg) at depths from the ground surface to 2 fbgs.

1.3 Primary Constituents of Concern (COCs)

Based on the historic use of the Site as well as results of the Phase II investigation and RI activities, the COCs are presented below:

- ***Soil/Fill:*** PAHs and lead.

1.4 Site Specific Action Levels (SSALs)

SSALs were developed for the Site. These SSALs will be applicable to soil/fill that greatly exceed CSCOs, have the potential to impact groundwater, or otherwise represent an unacceptable risk to public health or the environment in the context of reasonably anticipated future use and a Track 4 cleanup and therefore require corrective action. These

SSALs were developed based on the treatment and/or removal of source areas, including areas that have a greater potential for contaminant migration, and the feasibility of achieving the SSALs based on the nine factors outlined in 6NYCRR Part 375-1.8(f). The SSALs only apply to a Track 4 cleanup with a cover system to be installed over all areas with remaining soil/fill concentrations above CSCOs, a Site Management Plan (SMP), and Environmental Easement. The following SSALs were developed and used to designate soil/fill areas requiring remediation:

- Total PAHs > 500 mg/kg; this alternative Soil Cleanup Level was employed in lieu of individual commercial SCOs, per NYSDEC Commissioner Policy on Soil Cleanup Guidance (CP-51).
- Total Lead > 3,900 mg/kg.
- TCLP Lead > 5 mg/L.

1.5 Remedial Action Objectives

The remedial actions for the 1827 Fillmore Avenue Site must satisfy Remedial Action Objectives (RAOs). RAOs are site-specific statements that convey the goals for minimizing substantial risks to public health and the environment. For the 1827 Fillmore Avenue Site, appropriate RAOs have been defined as:

Soil
RAOs for Public Health Protection
• Prevent ingestion/direct contact with contaminated soil.
RAOs for Environmental Protection
• Prevent migration of contaminants that would result in groundwater or surface water contamination.

Groundwater
RAOs for Public Health Protection
• Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards

1.6 Project Organization and Responsibilities

The remedial actions will be completed by remedial construction specialty contractors under contract to 1827 Fillmore LLC and/or Benchmark-TurnKey. The NYSDEC Division of Environmental Remediation will monitor the activities, in consultation with the New York State Department of Health (NYSDOH), to verify that the work is performed in

accordance with the Brownfield Cleanup Agreement (BCA), the approved RAWP, 6NYCRR Part 375, and NYSDEC DER-10 guidance.

2.0 PREPARATION TASKS

The following tasks were or will be completed in preparation of remedial action activities:

2.1 Bench-Scale Lead Stabilization Assessment

Bench-scale soil/fill treatability testing was completed to evaluate potential soil amendments that will treat the soil to below 5 mg/L TCLP lead concentration and consequently result in the soil/fill being rendered non-hazardous and stabilized. After initial TCLP lead analysis of a homogeneous soil/fill sample from each of the lead-impacted intervals in the SB-21 and TP-13 areas, two fill amendments were evaluated in two concentrations in each sample as further described below.

2.1.1 Bench-Scale Lead Stabilization Pre- and Post-Treatment Testing

The scope of work associated with the bench-scale lead stabilization assessment completed by Benchmark-TurnKey consisted of the following:

- Two five-gallon buckets of soil/fill, one from each of the SB-21 (12 to 14 fbgs) and TP-13 (10 to 13 fbgs) areas, were collected by Benchmark-TurnKey using an excavator.
- Two soil/fill samples from the SB-21 area and two soil/fill samples from the TP-13 area were analyzed for TCLP lead. The baseline TCLP lead concentration at SB-21 were 8.29 mg/L and 10.1 mg/L; the baseline TCLP lead concentrations at TP-13 were 5.23 mg/L and 5.75 mg/L, indicating that the soil samples contained characteristic hazardous lead concentrations (i.e., TCLP lead > 5 mg/L).
- The higher of the two TCLP lead results were selected for treatment (i.e., 10.1 mg/L at SB-21 and 5.75 mg/L at TP-13)
- Eight total samples consisting of four homogenized soil/fill samples from SB-21 and four homogenized soil/fill samples from TP-13 were placed and weighed in disposable aluminum containers.
- Amendments were weighed into aliquots, based on the weight of the soil/fill sample and mixed into the soil/fill.
- A dosing of phosphoric acid at 0.5% and 1% by weight was applied to a sample from each area (four total samples).
- A dosing of 5% and 10% by weight of Portland cement and 3.25% by weight of water was applied to a sample from each area (four total samples).

- The eight treated soil/fill samples (four treated with phosphoric acid and four treated with Portland cement) were then re-tested for TCLP lead.

A summary of the bench-scale stabilization evaluation is included in Table 1. Results of the bench-scale lead stabilization and the recommended amendment/dosing are described below.

2.1.2 Bench-Scale Lead Stabilization Assessment Results

Results of all eight treated soil/fill samples indicate that TCLP lead concentrations were reduced to less than 5 mg/L (see Table 2).

All soil/fill samples treated with Portland cement were reduced to non-detect (<0.027 mg/L) concentrations of TCLP lead except for one sample identified as SB-21 PC-2 (0.622 mg/L), also well below the TCLP lead characteristic hazardous waste threshold of 5 mg/L.

All soil/fill samples treated with phosphoric acid were reduced to concentrations well below the TCLP lead characteristic hazardous waste threshold of 5 mg/L. Specifically, soil/fill samples treated with phosphoric acid were reduced to non-detect (<0.027 mg/L) or at concentrations less than 0.1 mg/L.

Bench-Scale evaluation laboratory analytical results (pre- and post-treatment) are provided in Appendix A.

2.2 Small and Large Soil Mound Characterization

Benchmark-TurnKey further characterized the small and large soil mounds present on-Site in accordance with the NYSDEC DER-10/Technical Guidance for Site Investigation and Remediation, Table 5.4(e)10 – Recommended Number of Soil Samples for Soil Imported To or Exported From a Site. The purpose of the sampling was to assess whether the soil can be reused on-Site.

The soil samples were collected using an excavator. Specifically, based on the volume of the large soil mound, estimated at approximately 6,000 cubic yards, laboratory analysis included 17 discrete/grab Target Compound List (TCL) plus Commissioner Policy 51 (CP-51) VOC samples and 7 composite samples for Part 375 SVOCs, Part 375 Metals, pesticides and PCBs. In addition, based on the anticipated volume of the small soil mound, estimated at approximately 500 cubic yards, 5 discrete/grab TCL plus CP-51 VOC samples and 2

composite samples for Part 375 SVOCs, Part 375 Metals, pesticides and PCBs were collected from the small mound.

As summarized in Table 3, VOCs and PCBs were either non-detect or at concentrations significantly below USCOs. 4 of the 7 composite samples from the large soil mound and both composite samples from the small mound detected benzo(a)pyrene at concentrations slightly above its respective Commercial SCO (CSCO). Certain individual concentrations of metals, pesticides and remaining SVOCs exceeded their respective USCOs but did not exceed CSCOs.

Based on the analytical results, it appears that the soil within the mounds can be used on-Site, but beneath the cover system. Segregation and/or additional sampling would be required if a portion of the mounded material were to be further assessed for use as cover soil. Soil mounds characterization laboratory analytical data is provided in Appendix B.

2.3 Pre-Construction Activities

Prior to implementation of the remedial activities, vegetation, shrubs and trees will be grubbed and cleared from the work area. Vegetation will be processed on-Site and will either be reused on-Site or transported off-site for disposal/re-use.

2.3.1 Erosion and Sedimentation Control

A Master Erosion Control Plan (MECP) for the Site is included in Appendix D. Erosion control measures (i.e., silt sock, hay bales, silt fence) will be put in place to ensure no potentially contaminated stormwater is discharged from the Site.

Asphalt paved roadways/areas exist on-Site; however, haul roads may be installed, as necessary, to allow truck access for remedial activities.

2.3.2 Utility Clearance

Prior to intrusive activities, Dig Safely New York (Call 811) will be contacted by the site contractor at a minimum of three (3) business days in advance of the work and informed of the intent to perform exaction work at the Site.

2.4 Health and Safety Plan Development

A Health and Safety Plan (HASP) has previously been prepared in conjunction with the Remedial Investigation Work Plan and it will be enforced by the remediation contractor in accordance with the requirements of 29 CFR 1910.120. The Benchmark-TurnKey HASP

covers on-site remedial activities. Benchmark-TurnKey will be responsible for site control and for the health and safety of its authorized site workers. Benchmark-TurnKey's HASP is provided in Appendix E. If a remediation contractor other than Benchmark-TurnKey is used, they will be required to develop a HASP at least as stringent as Benchmark-TurnKey's HASP.

2.4.1 Dust Monitoring and Controls

A Community Air Monitoring Plan (CAMP), which is included within the HASP in Appendix E, will be implemented during intrusive activities. If community air monitoring indicates the need for dust suppression, the contractor will apply a water spray across the excavation and surrounding areas, and on-site haul roads as necessary to mitigate airborne dust formation and migration. Potable water will either be obtained from a public hydrant, provided by an off-site water service or provided via a water truck with water from an off-site source. Other dust suppression techniques that may be used to supplement the water spray include:

- Hauling materials in properly tarped containers or vehicles.
- Restricting vehicle speeds on-Site.
- Hydro-seeding of final grades.

2.5 Waste Characterization

Waste Management landfill in Chaffee, New York has been selected as the permitted commercial landfill for soil disposal. Waste characterization samples will be collected in accordance with landfill analytical disposal requirements. Pre-characterization of the soil/fill will allow for direct loading and off-site transportation at the time of the impacted soil/fill excavation. Based on the results of the waste characterization sampling, impacted soil will be managed according to all federal, state and local waste disposal regulations.

2.6 SB-21 Area Additional Delineation

Benchmark collected additional samples in the SB-21 area to further delineate the extent of lead-impacted soil in that area. Samples SB-21-9 through SB-21-13 were collected from 12-16 fbgs and analyzed for total and TCLP lead. All samples were below SSALs except SB-21-10, which was below the total lead SSAL but exceeded 5 mg/L TCLP lead. Based on that result, Benchmark requested the lab run the sample from SB-21-10 16-19.5

fbgs, located at a depth below SB-21-10 12-16 fbgs. The sample from SB-21-10 16-19.5 fbgs was below the SSALs for total and TCLP lead. The additional samples and the delineated area of SB-21 is shown on Figure 3A. SB-21 area additional delineation laboratory analytical data is provided in Appendix C.

3.0 REMEDIAL ACTION ACTIVITIES

The NYSDEC will be notified at least 5 business days in advance of any planned remedial activities. Waste characterization sampling, in-situ soil/fill stabilization, excavation, post-excavation confirmatory sampling, and backfilling/site grading/cover placement activities will be performed in accordance with this work plan.

3.1 Remedial Stabilization and/or Excavation Activities

Remedial work will be documented by an experienced Benchmark-TurnKey professional, which will involve stabilization and/or excavation to the approximate horizontal and vertical limits identified below. As previously detailed, Benchmark-TurnKey has performed bench-scale treatability tests using soil/fill from the TP-13 and SB-21 lead areas, which indicated that blending 5% Portland cement or 0.5% phosphoric acid by weight will stabilize lead to below 5 mg/L TCLP lead. While both were effective, Portland cement was selected as the lead stabilization amendment for the 1827 Fillmore Avenue Site based on several factors including: relative ease of implementability; less stringent and safer transport, handling and management compared to phosphoric acid; availability; and, cost. Remedial activities will include:

- Excavation of PAH-impacted soil/fill within the TP-25/SS-13 area to the meet the SSAL of 500 mg/kg total PAHs followed by off-site disposal at a commercial sanitary landfill;
- Excavation of lead-impacted soil/fill within the MW-6 area to meet the SSAL of 3,900 mg/kg followed by off-site disposal at a commercial landfill;
- In-situ stabilization of characteristic hazardous lead soil/fill in the TP-13 area; and,
- In-situ stabilization of characteristic hazardous lead soil/fill in SB-21 area. Based on the relatively high total lead concentration observed in SB-21, soil immediately surrounding sample location SB-21 will be stabilized in-situ, then excavated to meet the SSAL of 3,900 mg/kg and disposed off-site at a commercial landfill.

Additional information relative to each respective hot spot is provided below:

3.1.1 PAH-Impacted Hotspot (TP-25/SS-13):

- Remedial Contractor will excavate the designated TP-25/SS-13 area to a target depth of 2 fbgs estimated at approximately 1,800 tons. These soils will be removed for off-Site disposal at Waste Management commercial landfill in Chaffee, New York.
- Post-excavation samples will be collected by the Engineer at a frequency up to one

per 900 square feet at the bottom of the excavation and up to one per 50-feet along perimeter sidewalls. Certain pre-characterization samples collected during the RI will be utilized as end-point confirmatory sidewall samples as shown on Figure 3; however, if the previously collected confirmatory samples are greater than 50 ft apart laterally, additional post-excavation sidewall samples will be collected. Samples will be analyzed for PAHs.

- In the event remaining soils exceed 500 mg/kg total PAHs, Remedial Contractor will excavate, transport and dispose additional soils at the direction of the Engineer, and Engineer will collect additional post-excavation soil samples.
- Following excavation, the Remedial Contractor will backfill the TP-25/SS-13 area with on-Site soil material.

3.1.2 Lead-Impacted Hotspot (MW-6):

- Remedial Contractor will excavate the designated area to a target depth of 8 fbgs. Soils at 0-8 fbgs overly lead-impacted materials and will be staged on-Site for reuse as backfill. Soils from 8-10 fbgs are lead-impacted and will be removed for off-Site disposal at Waste Management commercial landfill in Chaffee, New York.
- Post-excavation samples will be collected by the Engineer at a frequency of up to one per 900 square feet at the bottom of the excavation. The post-excavation bottom soil samples will be analyzed for total lead. The MW-6 excavation has been delineated laterally with four pre-characterization soil samples as shown on Figure 3. One sample was collected at each location (MW-6-1 through MW-6-4) from the depth of the lead-impacted soil (i.e., 8-12 ft) and analyzed for total lead. Analytical results from MW-6-1 through MW-6-4 samples are provided in Appendix C1.
- The pre-characterization samples delineating the lateral extents of the MW-6 area did not exceed the SSAL of 3,900 mg/kg of total lead; therefore, additional excavation of the delineated area will not be required. In the event remaining soils at the bottom of the excavation exceed 3,900 mg/kg, the Remedial Contractor will excavate, transport and dispose additional soils at the direction of the Engineer, and Engineer will collect additional post-excavation soil samples.
- Once soils are deemed to contain less than 3,900 mg/kg total lead, the Remedial Contractor will backfill and compact the excavation area with previously staged overburden materials in approximate one-foot lifts, supplemented with on-Site soil material.

3.1.3 Lead-Impacted Hotspot (TP-13):

- Remedial Contractor will excavate the designated area to a target depth of 10 fbgs. These soils overly lead-impacted materials and will be staged on-Site for reuse as backfill.
- Remedial Contractor will blend soils from approximately 10-17 fbgs, estimated at

approximately 3,000 tons, with 5% by weight Portland cement and water as necessary to adequately homogenize the cement material within the impacted soil interval. Work will be performed in approximate 50' x 50' areas. After blending, soils will be allowed to stabilize for approximately 24-hours. Post-treatment soil samples will be collected by the Engineer no less than every 500 cubic yards and analyzed for TCLP lead.

- In the event soils do not meet the SSAL less than 5 mg/L TCLP lead, Remedial Contractor will add additional Portland cement at the direction of the Engineer, and Engineer will retest the soils.
- Once soils are deemed to contain less than 5 mg/L TCLP lead the Remedial Contractor will backfill and compact the excavation area with previously staged overburden materials in approximate one-foot lifts.
- To confirm the limits of the stabilization area, grab samples of the soil outside the stabilization area will be collected for analysis of total and TCLP lead. One sample will be collected per 50 linear feet along the stabilized areas from the depth intervals stabilized. Pre-characterization samples taken from the stabilized depth intervals will be used to confirm stabilization limits; however, if the pre-characterization samples are greater than 50 ft apart laterally, additional samples will be collected. One sample will also be collected every approximate 900 square feet along the bottom of the stabilized area.

3.1.4 Lead-Impacted Hotspot (SB-21):

- Remedial Contractor will excavate the designated SB-21 area to a target depth of 12 fbgs. These soils overly lead-impacted materials located 12-16 fbgs and will be staged on-Site for reuse as backfill. Some lead-impacted soil is located along the east property boundary of the BCP site (see Figure 3 and 3A); the east adjacent property has common ownership with the BCP site. If soils on the east adjacent property require excavation to access lead-impacted soil on the BCP site (e.g., to bench or slope back excavations), such soil may require temporary storage on the BCP site due to lack of storage space on the adjacent property; however, off-site soil (if any) will return to its original location off-site upon completion of the SB-21 area remedial work [Note- soil samples PC Offsite A and PC Offsite B confirmed that offsite soil that may be removed is non-hazardous (see Appendix C2). Soil on the BCP site that is excavated to access overlying lead-impacted material will remain on the BCP site. On-site and off-site soil will be stockpiled on and covered with plastic sheeting and will not be co-mingled.
- In lieu of sloping the excavation, the Remedial Contractor may install sheet pile walls along the BCP site boundary to secure the eastern excavation sidewall to access the lead-impacted soil.
- Remedial Contractor will blend soils from approximately 12-16 fbgs, estimated at approximately 10,500 tons, with 5% Portland cement by weight and water as necessary to adequately homogenize the cement material within the impacted soil

interval. Work will be performed in approximately 50 'x 50' areas. After blending, soils will be allowed to stabilize for approximately 24-hours. Post-treatment samples will be collected by the Engineer at a frequency of approximately one per 500 cubic yards and analyzed for TCLP and total lead.

- In the event soils do not meet the SSAL of less than of 5 mg/L TCLP lead, Remedial Contractor will add additional Portland cement at the direction of the Engineer, and Engineer will retest the soils.
- Once soils are deemed to contain less than 5 mg/L TCLP lead the Remedial Contractor will excavate the treated soils. Soils in the immediate vicinity of SB-21 will be excavated to meet total lead thresholds of 3,900 mg/kg, estimated at up to 3,000 tons, and disposed off-site at Waste Management commercial landfill in Chaffee, New York. Remaining stabilized soils meeting the SSALs of 3,900 mg/kg total lead and 5 mg/L TCLP lead will be recompacted and backfilled at the bottom of the excavation backfill.
- To confirm the limits of the stabilization area, grab samples of the soil outside the stabilization area will be collected for analysis of total and TCLP lead. One sample will be collected per 50 linear feet along the stabilized areas from the depth intervals stabilized. Certain pre-characterization soil samples taken from the stabilized depth intervals will be used to confirm stabilization limits. However, if the pre-characterization samples are greater than 50 ft apart laterally, additional samples will be collected [Note- SB-21 area pre-characterization samples are provided in Appendix C3]. One sample will be collected every approximate 900 square feet along the bottom of the stabilized area.
- Remedial Contractor will backfill and compact the excavation area in approximate one-foot lifts with staged overburden soils, supplemented with on-Site soil material.

Final volumes will be determined through post-excavation confirmatory sampling.

The Contractor will strive to achieve a 1:1 (45°) slope for excavations to mitigate sloughing; however, a minimum 1:3 (18°) slope will be maintained for excavations where the Contractor requires access to enter the excavation (e.g., to reach the required remedial depths). As with any remedial excavation, actual site conditions (e.g., visual and/or confirmatory sample analytical results) will dictate final excavation limits. Final excavation limits will be surveyed with a handheld Trimble GeoXH GPS unit and average excavation depths will be manually measured in the field. Horizontal limits and locations of final remedial excavations will be presented on the Site Map in the Final Engineering Report (FER).

Care will be taken to minimize dust formation during in-place treatment, excavation, and loading and to prevent any dust or mud from being tracked off-Site. The excavation

equipment will have sufficient boom length to allow for placement of soil/fill directly into the truck bed if ground surface conditions are conducive to truck traffic (e.g. dry and firm). Side dumping (i.e., with a front-end loader) will only be permitted if ground conditions are not conducive to truck traffic and fugitive dust can be consistently controlled within the Community Air Monitoring Plan action limits.

3.2 Post-Stabilization/Excavation Verification Sampling

3.2.1 Lead-Stabilization Areas (TP-13 and SB-21)

As indicated above regarding the TP-13 and SB-21 areas, 24 hours after stabilization, a composite sample representing up to an approximate 500 CY aliquot of stabilized soil, consisting of four individual grab samples, will be collected from the stabilized area and analyzed for TCLP lead to confirm that stabilization below the 5 mg/L TCLP lead SSAL has been achieved. To confirm the limits of stabilization in the TP-13 and SB-21 areas, grab samples of the soil outside the stabilization area will be collected for analysis of total and TCLP lead. One sample will be collected per 50 linear feet along the stabilized areas from the depth intervals stabilized and one sample will be collected every approximate 900 square feet along the bottom of the stabilized area. Pre-characterization samples will be used to delineate the lateral extent of the stabilized area; additional post-excavation samples will be collected where the pre-characterization samples are greater than 50-ft apart laterally. Where pre-characterization samples include both total lead and TCLP lead samples, those samples may be used as end-point confirmatory samples. Where a pre-characterization sample includes only one of those parameters, that end-point sample will be supplemented with the other parameter to provide an end-point confirmatory sample with both total lead and TCLP lead results.

3.2.2 Remedial Excavation Areas (MW-6 and TP-25/SS-13)

Post-excavation confirmation samples will be collected from the MW-6 and TP-25/SS-13 remedial excavation areas. A minimum of one sample per 50 linear feet of sidewall and one sample for each 900 square feet of excavation bottom will be used to confirm the excavation limits meet SSALs. Confirmatory samples collected from the MW-6 area will be analyzed for total lead and confirmatory samples from the TP-25/SS-13 Area will be analyzed for PAHs.

Four pre-characterization samples delineating the lateral extents of the MW-6 area have been collected at the required 50-ft or less intervals. The SSAL for total lead was not exceeded for any of the four samples. Therefore, post-excavation sidewall samples will not be required. Post-excavation bottom samples will be collected every 900 square feet.

In the TP-25/SS-13 Area, numerous pre-characterization results exist that have substantially delineated that area. Where pre-characterization samples exist that show PAHs in soil meet the SSALs at the depth interval of the planned excavation (i.e., 0-2 fbgs), those samples may be used as end-point confirmatory samples. Additional post-excavation side-wall samples will be collected for sample locations greater than 50-feet apart laterally and additional post-excavation bottom samples will be collected to meet the frequency of one sample per 900 square feet.

An equivalent Category B deliverables package will be furnished with the data to allow data evaluation and preparation of a Data Usability Summary Report (DUSR) by an independent, third party data validation expert. Expedited turnaround times may be requested for the analytical results to minimize the time that the excavation(s) remains open. Quality Assurance (QA) samples will be collected to support the verification sample data evaluation. The QA samples will include a minimum of one matrix spike, one matrix spike duplicate, and one blind duplicate per 20 verification samples. Dedicated equipment will be used to avoid the need for equipment blanks.

3.3 Excavation Backfill

Following NYSDEC concurrence that the remedial excavation is complete, the excavation will be backfilled with approved backfill material in accordance with DER-10.

Backfill material may consist of the following materials:

- Gravel, rock, or stone, consisting of virgin material, from a permitted mine or quarry may be imported, without chemical testing, if it meets the requirements of DER-10, or as otherwise approved by NYSDEC.
- Recycled concrete or brick from a NYSDEC-registered construction and demolition debris processing facility may be imported, without chemical testing, if it meets the requirements of DER-10, or as otherwise approved by NYSDEC.
- Imported soil/fill originating from known off-site sources having no evidence of disposal or releases of hazardous substances, hazardous, toxic or radioactive wastes, or petroleum, and which meets the chemical criteria for Commercial Use

Sites in DER-10, Appendix 5. No off-site materials meeting the definition of a solid waste as defined in 6NYCRR, Part 360-1.2(a) shall be used as backfill.

- Re-use of on-site soil/fill, including excavated overburden soil/fill removed to access impacted soil and soil/fill from the small and large soil mounds that are currently located on-site; these materials will only be utilized below the soil cover system. The soil/fill from the on-Site mounds will be screened prior to being used as backfill and any debris identified in the piles will be removed off-Site and disposed of appropriately.

Imported soil/fill material will be subject to characterization requirements in accordance with DER-10 Table 5.4(e)10, or as otherwise approved by NYSDEC prior to import to the Site. Characterization testing will be performed by an independent, NYSDOH ELAP-approved laboratory. An equivalent Category B deliverables package will be furnished with the data to allow data evaluation and preparation of a Data Usability Summary Report by an independent, third party data validation expert. QA samples will be collected to support the data evaluation. The QA samples will include a minimum of one matrix spike, one matrix spike duplicate, and one blind duplicate per 20 verification samples.

3.4 Groundwater Management

Water removed from excavations and surface water run-in to excavations during the impacted soil removal will be handled on-site prior to discharge to the municipal sewer. In general, water removed from excavations will be stored/settled in a portable storage tank, and if deemed necessary, will be pumped through a bag or cartridge filter prior to treatment using granular activated carbon (GAC). Following completion of excavation work, settled solids remaining in the tank and spent filter bags will be disposed of off-site.

If the accumulated waters required treatment, the spent GAC will be characterized and regenerated off-site, or disposed at a permitted disposal facility in accordance with applicable federal and state regulations. The storage tank will be decontaminated via pressure washing. Benchmark-TurnKey or the Site owner will coordinate with the municipal sanitary sewer to obtain any necessary temporary sewer discharge permits.

3.5 Cover System

A cover system will be installed across the Site to prevent direct contact with underlying soil. The planned cover system includes different cover types, including vegetated soil cover, and hardscaped (asphalt) areas. Soils imported for use as cover will be subject to

analysis per DER-10 and NYSDEC approval. An existing asphalt pavement cover system is present along the perimeter of the property. The existing asphalt will be inspected and repaired as necessary to ensure it properly functions as a part of the Site-wide cover system. A planned cover system layout is provided on Figure 4. Where soil cover system transitions to hardscape, and/or at the limits of the BCP property, the cover will be keyed-in as necessary to achieve the minimum 12-inches of approved backfill material without tapering as shown on Cover System Details provided in Figure 4.

4.0 REMEDIAL ACTIVITIES SUPPORT DOCUMENTS

4.1 Health and Safety Protocols

Benchmark-TurnKey has prepared a HASP for use by our employees in accordance with 40 CFR 300.150 of the NCP and 29 CFR 1910.120. The HASP, provided in Appendix E, includes the following site-specific information:

- A hazard assessment.
- Training requirements.
- Definition of exclusion, contaminant reduction, and other work zones.
- Monitoring procedures for Site operations.
- Safety procedures.
- Personal protective clothing and equipment requirements for various field operations.
- Disposal and decontamination procedures.

The HASP also includes a contingency plan that addresses potential site-specific emergencies, and a Community Air Monitoring Plan as described above.

Health and safety activities will be monitored throughout the remedial field activities. A member of the field team will be designated to serve as the Site Safety and Health Officer (SSHO). The SSHO will report directly to the Project Manager and the Corporate Health and Safety Coordinator. The HASP will be subject to revision as necessary, based on new information that is discovered during the field investigation and/or remedial activities.

4.1.1 Community Air Monitoring

Real-time community air monitoring will be performed during remedial activities at the Site. A Community Air Monitoring Plan is included with Benchmark-TurnKey's HASP. Particulate and VOC monitoring will be performed along the downwind perimeter of the work area during subgrade excavation, grading, and soil/fill handling activities in accordance with this plan. The CAMP is consistent with the requirements for community air monitoring at remediation sites as established by the NYSDOH and NYSDEC. Accordingly, it follows procedures and practices outlined under DER-10 Appendix 1A (NYSDOH's Generic Community Air Monitoring Plan) and Appendix 1B (Fugitive Dust and Particulate Monitoring).

4.2 Citizen Participation Activities and Fact Sheets

NYSDEC will coordinate and lead community relations throughout the course of the project with support from Benchmark-TurnKey as requested. A Citizen Participation (CP) Plan has previously been prepared as a separate document and submitted to the NYSDEC. A copy of the approved CP Plan was placed at the designated document repository.

The NYSDEC, with input from Benchmark-TurnKey and 1827 Fillmore LLC, will issue project-related fact sheets to keep the public informed of BCP activities.

5.0 REPORTING AND SCHEDULE

Benchmark-TurnKey environmental professionals will be on-site full-time during all major remedial activities to monitor and document: construction stake-out; record drawings; daily reports of remediation activities; community air monitoring results; post-excavation sampling and analysis; and progress photographs and sketches. Full details of the remedial activities will be included in the Final Engineering Report (FER).

Work will commence upon NYSDEC approval of the work plan, anticipated April 2019.

6.0 REMEDIAL ACTIVITIES REPORTING

6.1 Construction Monitoring

A Benchmark-TurnKey scientist or engineer will be on-site on a full-time basis to document remedial activities. Such documentation will include, at minimum, daily reports of Remedial Action activities, community air monitoring results, photographs and sketches. Appendix F contains sample project documentation forms.

The completed reports will be available on-site and submitted to the NYSDEC as part of the FER. The NYSDEC will be promptly notified of problems requiring modifications to this Work Plan prior to proceeding or completion of the construction item.

Photo documentation of the remedial activities will be prepared by a field representative throughout the duration of the project as necessary to convey typical work activities, changed conditions, and/or special circumstances. If determined to be necessary, periodic on-site construction progress meetings will be held to which NYSDEC will receive an invitation.

6.2 Final Engineering Report

A FER will be prepared at the conclusion of remedial activities. The FER will include the following information and documentation, consistent with the NYSDEC's DER-10 Technical Guidance for Site Remediation:

- Introduction and background.
- Planimetric map showing the areas remediated, including significant site features.
- Map showing the lateral limits of any excavations and/or treatment areas.
- Tabular summaries of unit quantities including: volume of soil excavated and/or treated and disposition of excavated/treated soil; and, origin and volume of imported soil.
- Planimetric map showing location of all verification and other sampling locations with sample identification labels/codes.
- Tabular comparison of verification and other sample analytical results to SCOs and SSALs. An explanation shall be provided for any results exceeding acceptance criteria.
- Documentation on the disposition of impacted soil removed.
- Documentation of the cover system, including survey elevations.

- Copies of daily inspection reports and, if applicable, problem identification and corrective measure reports.
- Photo documentation of remedial activities.
- Text describing the remedial activities performed; a description of any deviations from the Work Plan and associated corrective measures taken; and other pertinent information necessary to document that the Site activities were carried out in accordance with this Work Plan.

In addition, 1827 Fillmore LLC, will subcontract for third-party data review of post-excavation verification data by a qualified, independent data validation expert. Specifically, a Data Usability Summary Report (DUSR) will be prepared, with appropriate data qualifiers added to the results. The DUSR format will follow the NYSDEC's September 1997 DUSR guidelines and draft DER-10 guidance. The DUSR and any necessary qualifications to the data will be appended to the FER.

6.3 Site Management Plan

For any BCP site not cleaned up to NYSDEC Part 375 USCOs, preparation of a SMP that describes site-specific Institutional Controls and/or Engineering Controls (IC/EC) is a required component of the final remedy. Therefore, as part of the final remedy, a SMP will be prepared. Consistent with NYSDEC BCP requirements, the SMP will include the following components:

- **Engineering and Institutional Controls Plan**. Engineering controls include any physical barrier or method employed to actively or passively contain, stabilize, or monitor contaminants; restrict the movement of contaminants; or eliminate potential exposure pathways to contaminants. Institutional controls at the site will include groundwater use restrictions and use restrictions of the site to commercial or industrial purposes.
- **Operation and Maintenance Plan** that describes the measures necessary to operate, monitor, and maintain the soil cover system.
- **Excavation Work Plan** to assure that post-remediation intrusive activities and soil/fill handling at the Property related to redevelopment, operation, and maintenance are completed in a safe and environmentally responsible manner.
- **Site Monitoring Plan** that includes provisions for a groundwater monitoring plan and a Property-wide inspection program to assure that the IC/ECs remain effective.
- **Environmental Easement** filed with Erie County.

7.0 REFERENCES

1. New York State Department of Environmental Conservation. *DER-10 Technical Guidance for Site Investigation and Remediation.* May 2010.
2. New York State Department of Environmental Conservation. *6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 and 375-6.* Effective December 14, 2006.
3. Benchmark-TurnKey, Remedial Investigation/Alternatives Analysis Report *1827 Fillmore Avenue Site, Buffalo, New York.* Revised January 2019.

TABLES

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Table 1

SUMMARY OF BENCH-SCALE LEAD STABILIZATION EVALUATION
1827 Fillmore Avenue Site
Buffalo, New York

PHOSPHORIC ACID

Sample	PRE-TREATMENT TCLP LEAD (MG/L)	Weight of Material (lb)	Percent by Weight of Phosphoric Acid (%)	Actual Volume of Phosphoric Acid (ml)		POST-TREATMENT TCLP LEAD (MG/L)
SB-21 PA-1 (12-14')	10.1	2.004	0.5	0.12		0.088
TP-13 PA-1 (10-13')	5.75	2.000	0.5	0.12		0.08
SB-21 PA-2 (12-14')	10.1	2.000	1.0	0.24		0.044
TP-13 PA-2 (10-13')	5.75	2.000	1.0	0.24		ND

PORTLAND CEMENT

Sample	PRE-TREATMENT TCLP LEAD (MG/L)	Weight of Material (lb)	Percent by Weight of Portland Cement (%)	Actual Weight of Portland Cement (lb)	% Water	POST-TREATMENT TCLP LEAD (MG/L)
SB-21 PC-1 (12-14')	10.1	2.004	5.0	0.101	3.25	ND
TP-13 PC-1 (10-13')	5.75	2.000	5.0	0.101	3.25	ND
SB-21 PC-2 (12-14')	10.1	2.002	10.0	0.201	3.25	0.622
TP-13 PC-2 (10-13')	5.75	2.002	10.0	0.201	3.25	ND

Notes:

TCLP = Toxic Characteristic Leaching Procedure

MG/L = milligrams per liter

lb = pound

ml = milliliter

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

Table 2

Summary of Bench-Scale Lead Stabilization Analytical Results
1827 Fillmore Avenue Site
Buffalo, New York

Pre-Treated Sample ID	Initial TCLP (mg/L)	Post-Treated TCLP Results - Treated with:				TCLP Lead Guidance (mg/L)
		0.5% Phosphoric Acid	1.0% Phosphoric Acid	5% Portland Cement + 3.25% H_20	10% Portland Cement + 3.25% H_20	
SB-21 (12-14) BS-1	10.1	SB-21 PA-1 0.088 J	SB-21 PA-2 0.044 J	SB-21 PC-1 < 0.027	SB-21 PC-2 0.622	5 5
TP-13 (10-13) BS-2	5.75	TP-13 PA-1 0.080 J	TP-13 PA-2 < 0.027	TP-13 PC-1 < 0.027	TP-13 PC-2 < 0.027	5 5

Notes:
TCLP = Toxic Characteristic Leaching Procedure
mg/L = milligrams per liter

TABLE 3 -SUMMARY OF SMALL AND LARGE SOIL MOUND CHARACTERIZATION ANALYTICAL RESULTS

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

Parameter [1]	Unrestricted SCOs[2] (ppm)	Commercial SCOs[2] (ppm)	Pile 1 VOC-1	Pile 1 VOC-2	Pile 1 VOC-3	Pile 1 VOC-4	Pile 1 VOC-5	Pile 1 VOC-6	Pile 1 VOC-7	Pile 1 VOC-8	Pile 1 VOC-9	Pile 1 VOC-10	Pile 1 VOC-11	Pile 1 VOC-12	Pile 1 VOC-13	Pile 1 VOC-14	Pile 1 VOC-15	Pile 1 VOC-16	Pile 1 VOC-17	Pile 1 Comp-1	Pile 1 Comp-2	Pile 1 Comp-3	Pile 1 Comp-4	Pile 1 Comp-5	Pile 1 Comp-6	Pile 1 Comp-7	Pile 2 VOC-1	Pile 2 VOC-2	Pile 2 VOC-3	Pile 2 VOC-4	Pile 2 VOC-5	Pile 2 Comp-1	Pile 2 Comp-2
			LARGE SOIL MOUND																								SMALL SOIL MOUND						
Volatile Organic Compounds (VOCs) - mg/kg[3]																																	
Methylene chloride	**0.05**	**500**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0027 J	ND	ND	ND	0.0022 J	0.0039 J	ND	ND	--	--	--	--	--	--	--	0.0026 J	ND	0.0025 J	ND	0.0029 J	--	--
Semi-Volatile Organic Compounds (SVOCs) - mg/kg[3]																																	
Acenaphthene	**20**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.16	0.11 J	0.44	0.34	0.087 J	0.84	0.74	--	--	--	--	--	0.12 J	0.52 J
Acenaphthylene	**100**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.051 J	0.042 J	0.063 J	0.09 J	0.053 J	0.12 J	0.078 J	--	--	--	--	--	0.057 J	0.15 J
Anthracene	**100**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.44	0.35	1	0.88	0.23	1.3	1.6	--	--	--	--	--	0.32	0.92
Benzo(a)anthracene	**1**	**5.6**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.88	1	**1.9**	**2.1**	0.86	**2.5**	**2.9**	--	--	--	--	--	0.84	**2.7**
Benzo(a)pyrene	**1**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.76	0.92	**1.6**	**1.8**	0.8	**2**	**2.6**	--	--	--	--	--	**1.1**	**2.3**
Benzo(b)fluoranthene	**1**	**5.6**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	**1.3**	**2.2**	**2.4**	**1.1**	**2.7**	**3.3**	--	--	--	--	--	**1.1**	**3.4**
Benzo(g,h,i)perylene	**100**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.46	0.58	0.89	1	0.52	1.2	1.3	--	--	--	--	--	0.49	1.6
Benzo(k)fluoranthene	**0.8**	**56**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	0.43	0.66	**0.88**	0.4	**0.92**	**1.2**	--	--	--	--	--	0.36	**1.2**
Chrysene	**1**	**56**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.84	**1.1**	**1.8**	**2.1**	0.91	**2.3**	**2.7**	--	--	--	--	--	0.86	**2.8**
Dibenzo(a,h)anthracene	**0.33**	**0.56**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11 J	0.14	0.23	0.26	0.12	0.26	**0.34**	--	--	--	--	--	0.12 J	**0.39 J**
Dibenzofuran	**--**	**--**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11 J	0.061 J	0.31	0.21	0.059 J	0.58	0.44	--	--	--	--	--	0.073 J	0.34 J
Fluoranthene	**100**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.9	2.2	4.3	4.9	1.9	6.1	6.7	--	--	--	--	--	1.8	6.6
Fluorene	**30**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17 J	0.11 J	0.51	0.39	0.088 J	0.69	0.75	--	--	--	--	--	0.12 J	0.48 J
Indeno(1,2,3-cd)pyrene	**0.5**	**5.6**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.5	**0.61**	**0.99**	**1.1**	**0.56**	**1.3**	**1.5**	--	--	--	--	--	**0.53**	**1.6**
Naphthalene	**12**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.063 J	0.05 J	0.21	0.072 J	0.048 J	0.15 J	0.13 J	--	--	--	--	--	0.048 J	0.14 J
Phenanthrene	**100**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.6	1.4	3.7	3.7	1.1	5.2	5.7	--	--	--	--	--	1.2	4.7
Pyrene	**100**	**500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	1.8	3.4	3.8	1.5 J	4.9	5.3	--	--	--	--	--	1.4	5.1
		Total SVOCs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*10.914 J*	*12.203 J*	*24.203 J*	*26.022 J*	*10.335 J*	*33.06 J*	*37.278 J*	--	--	--	--	--	*10.538*	*34.94*
Metals - mg/kg																																	
Arsenic	**13**	**16**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5.1	4.7	5.29	6.09	6.86	6.64	3.87	--	--	--	--	--	4.84	4.35
Barium	**350**	**400**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	98.4	126	70.6	61.2	90.3	81.9	58.1	--	--	--	--	--	109	116
Beryllium	**7.2**	**590**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.356	0.513	0.424	0.374	0.463	0.407	0.326	--	--	--	--	--	0.488	0.316
Cadmium	**2.5**	**9.3**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.829	2.15	0.776	0.735	1.26	0.762	0.544	--	--	--	--	--	0.794	0.724
Chromium	**30**	**1500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.3	13.2	13.2	12.5	14.4	10.7	9.72	--	--	--	--	--	13.9	11.1
Copper	**50**	**270**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	42	31.4	30.5	23	23.6	34.2	16.9	--	--	--	--	--	32.2	41.3
Cyanide	**27**	**27**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.61 J	0.54	ND	ND	0.31 J	0.49 J	ND	--	--	--	--	--	0.35 J	0.82 J
Lead	**63**	**1000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**84.6**	47.5	54.3	**76.2**	**63.5**	**77.3**	36	--	--	--	--	--	**66.1**	**83.3**
Manganese	**1600**	**10000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	300	615	317	232	374	312	188	--	--	--	--	--	**2060**	302
Nickel	**30**	**310**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.8	9.96	14.1	12	13.6	11.8	9.95	--	--	--	--	--	10.9	12.1
Selenium	**3.9**	**1500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.91 J	1.4	1.06	0.992	1.86	1	0.748 J	--	--	--	--	--	1.34	0.947
Silver	**2**	**1500**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21 J	0.216 J	0.166 J	0.187 J	0.22 J	0.762 J	ND	--	--	--	--	--	0.52 J	0.13 J
Zinc	**109**	**10000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**127**	80.9	**113**	99.2	**192**	**117**	63.3	--	--	--	--	--	**131**	**206**
Mercury	**0.18**	**2.8**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.081	0.041 J	0.087	0.102	0.068 J	0.085	0.060 J	--	--	--	--	--	0.093	0.069
Organochlorine Pesticides - mg/kg[3]																																	
4,4'-DDD	**0.0033**	**92**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0237**	**0.00465**	0.00314	**0.00364**	0.00166 J	ND	**0.00394**	--	--	--	--	--	0.00193 J	**0.0112 J**
4,4'-DDE	**0.0033**	**62**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0376**	**0.0663**	**0.00934**	**0.153 D**	**0.0527**	**0.0226**	**0.0235**	--	--	--	--	--	**0.0319**	**0.0133 JPI**
4,4'-DDT	**0.0033**	**47**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0452**	**0.0554**	**0.0108**	**0.123**	**0.0491**	**0.0201**	**0.0224**	--	--	--	--	--	**0.0353**	**0.0777**
Dieldrin	**0.005**	**1.4**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00447	ND	ND	ND	ND	ND	ND	--	--	--	--	--	ND	ND
alpha-Chlordane	**0.094**	**24**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0227	0.0115	0.0066	0.00175 JPI	0.00775	0.00572 PI	0.0092 PI	--	--	--	--	--	0.00721	ND
PCBs - mg/kg[3]																																	
Total PCBs	**0.1**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	0.0226 J	--	--	--	--	--	ND	0.0465 J

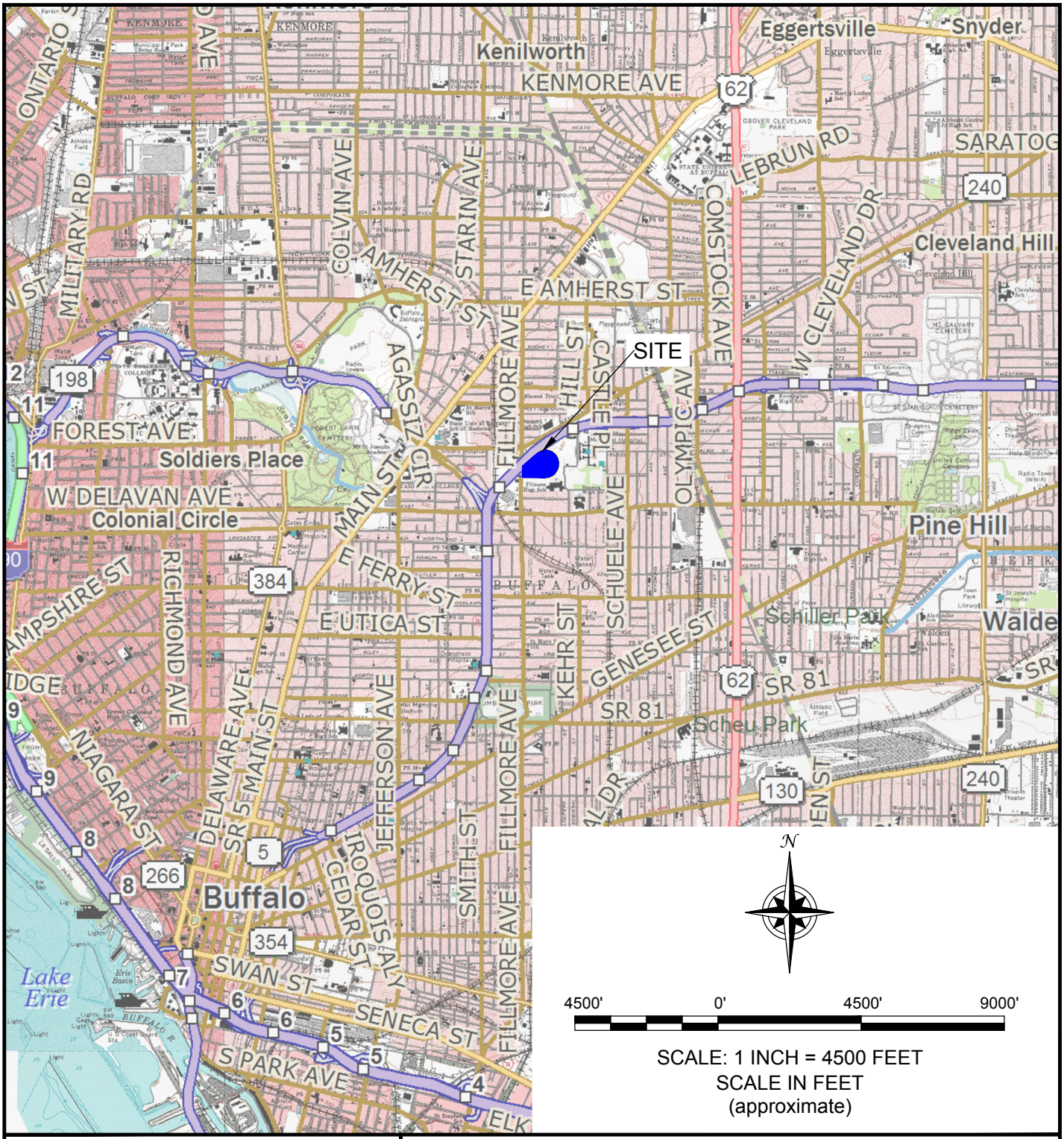
Notes:
1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC Part 375 Soil Cleanup Objectives (SCOs).
3. Sample results were reported by the laboratory in micrograms per kilogram (ug/kg) and converted to milligram per kilogram (mg/kg) for comparison to SCOs.

Definitions:
mg/kg = milligrams per kilogram.
ND = Parameter not detected above laboratory detection limit.
-- = Sample not analyzed for parameter.
D = Indicates a dilution
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
P =The RPD between the results for the two columns exceeds the method-specified criteria.
I = The lower value for the two columns has been reported due to obvious interference.

Exceeds Unrestricted SCOs
Exceeds Commercial SCOs

FIGURES

FIGURE 1



SCALE: 1 INCH = 4500 FEET
SCALE IN FEET
(approximate)

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0421-017-001

DATE: NOVEMBER 2018

DRAFTED BY: CCB

SITE LOCATION & VICINITY MAP

REMEDIAL ACTION WORK PLAN

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

PREPARED FOR
1827 FILLMORE LLC

DATE: NOVEMBER 2018
DRAFTED BY: CCB

FIGURE 2

SITE PLAN (AERIAL)

REMEDIAL ACTION WORK PLAN

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

PREPARED FOR
1827 FILLMORE LLC

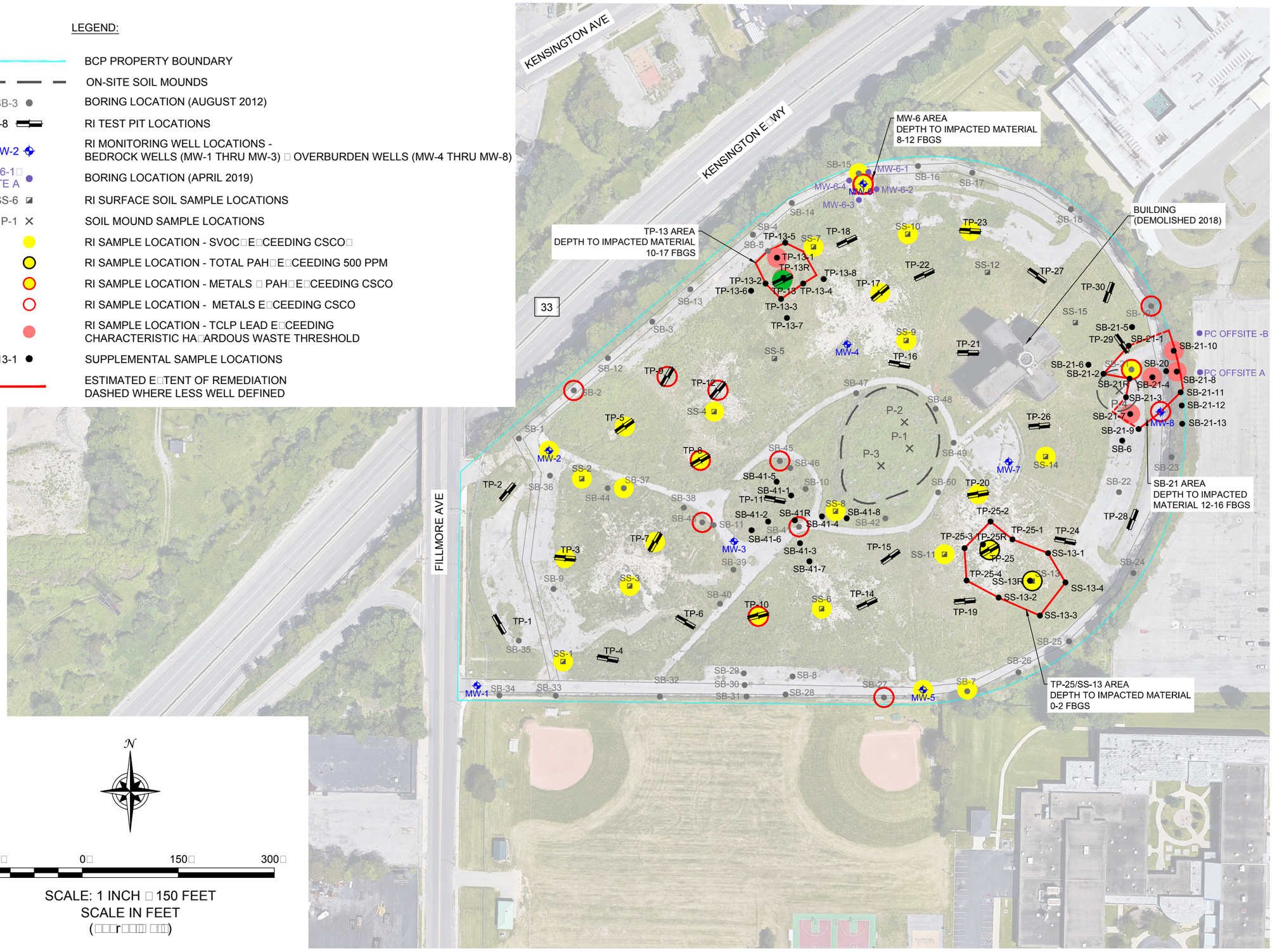
BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0421-017-001

F:\CAD\Benchmark\Rupp, Baase, Pfalzgraf & Cunningham LLC\1827 Fillmore Avenue\1D - Remedial Action Work Plan\Figure 3: Hot Spot Remedial Areas.dwg

LEGEND:

- BCP PROPERTY BOUNDARY
- ON-SITE SOIL MOUNDS
- SB-3 — BORING LOCATION (AUGUST 2012)
- TP-8 — RI TEST PIT LOCATIONS
- MW-2 — RI MONITORING WELL LOCATIONS - BEDROCK WELLS (MW-1 THRU MW-3) □ OVERBURDEN WELLS (MW-4 THRU MW-8)
- MW-6-1□ PC OFFSITE A — BORING LOCATION (APRIL 2019)
- SS-6 — RI SURFACE SOIL SAMPLE LOCATIONS
- P-1 — SOIL MOUND SAMPLE LOCATIONS
- RI SAMPLE LOCATION - SVOC□E□CEEDING CSCO□
- RI SAMPLE LOCATION - TOTAL PAH□E□CEEDING 500 PPM
- RI SAMPLE LOCATION - METALS □ PAH□E□CEEDING CSCO
- RI SAMPLE LOCATION - METALS E□CEEDING CSCO
- RI SAMPLE LOCATION - TCLP LEAD E□CEEDING CHARACTERISTIC HA□ARDOUS WASTE THRESHOLD
- TP-13-1 — SUPPLEMENTAL SAMPLE LOCATIONS
- ESTIMATED E□TENT OF REMEDIATION DASHED WHERE LESS WELL DEFINED



N

150□ 0□ 150□ 300□

SCALE: 1 INCH □ 150 FEET
SCALE IN FEET
(□□□r□□□□ □□□)

DATE: NOVEMBER 2018
DRAFTED BY: RFL

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

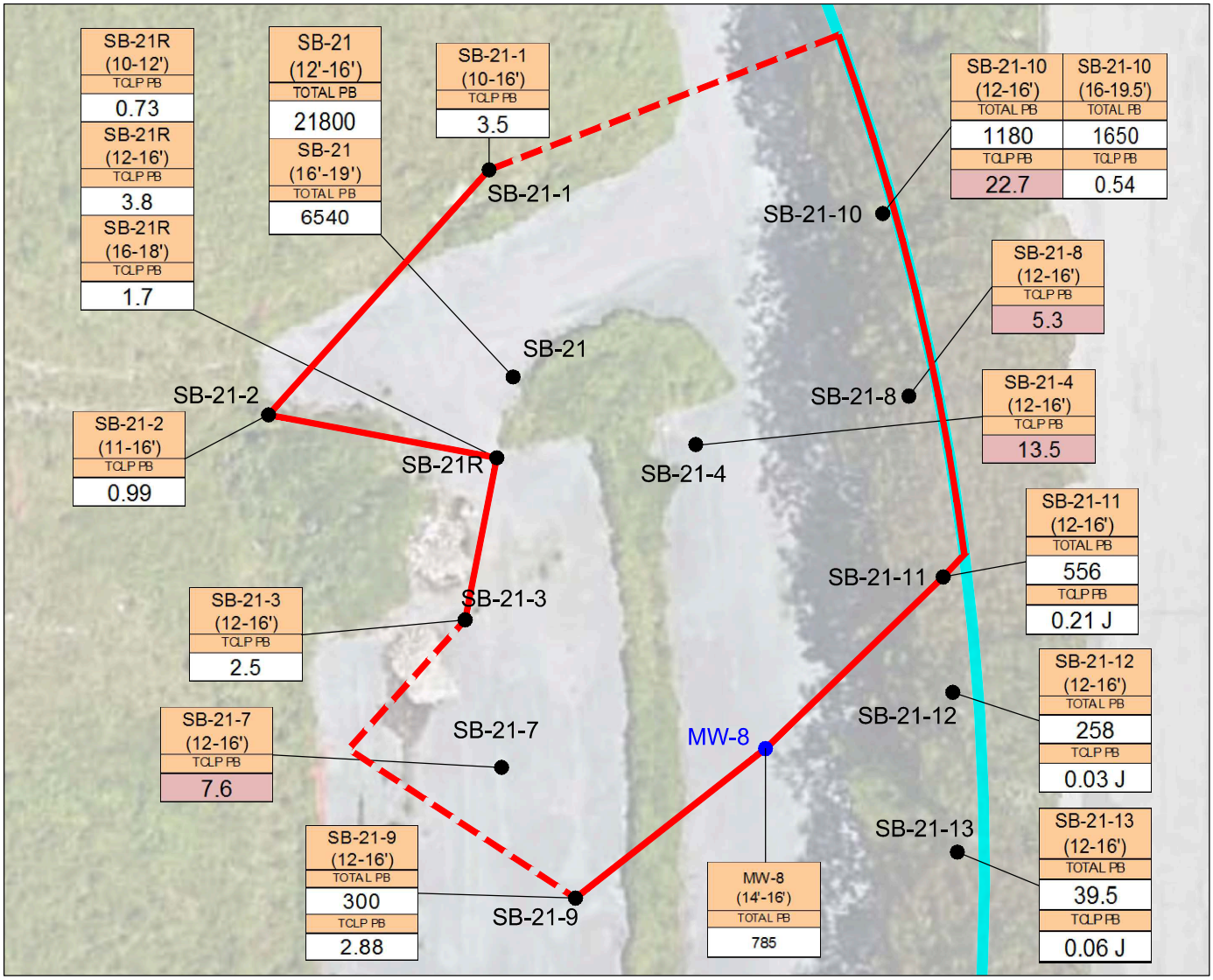
JOB NO.: 0421-017-001

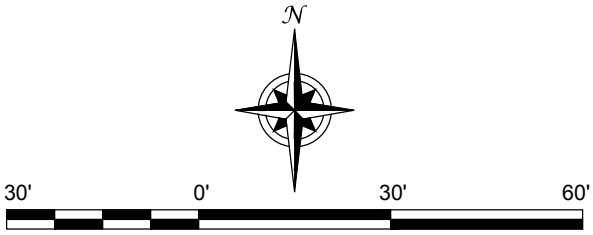
HOT SPOT SOIL REME□IAL AREAS

REMEDIAL ACTION WORK PLAN
1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK
PREPARED FOR
1827 FILLMORE LLC

FIGURE 3

FIGURE 3A





SCALE: 1 INCH = 30 FEET
SCALE IN FEET
(approximate)

LEGEND:

- BCP PROPERTY BOUNDARY
- SB-21-1 ● SUPPLEMENTAL SAMPLE LOCATIONS
- MW-8 ● MONITORING WELL LOCATIONS
- ESTIMATED EXTENT OF REMEDIATION DASHED WHERE LESS WELL DEFINED
- SB-21-3 (12-16') / TCLP PB / 2.5 — SAMPLE LOCATION AND DEPTH; PARAMETER - TOTAL OR TCLP; CONCENTRATION - TOTAL (MG/KG) OR TCLP (MG/L)

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0421-017-001

DATE: MARCH 2019

DRAFTED BY: CMS

SB-21 HOT-SPOT AREA

REMEDIAL ACTION WORK PLAN

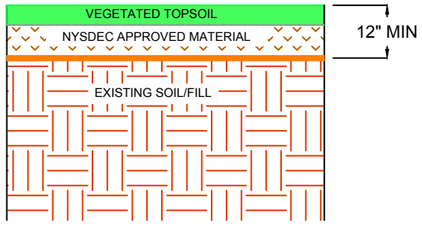
1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

PREPARED FOR
1827 FILLMORE LLC

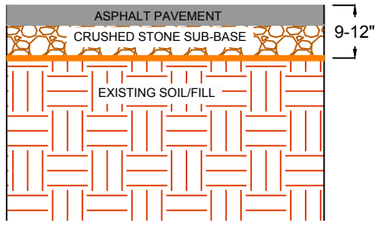
LEGEND:

- BCP PROPERTY BOUNDARY
- PROPOSED PARKING LOT AREA (BY OTHERS)

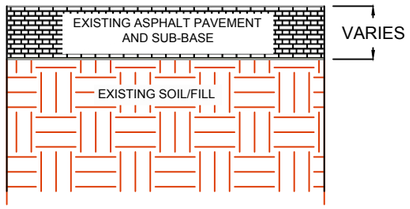
VEGETATED SOIL COVER SYSTEM DETAIL
NTS



NEW ASPHALT PAVEMENT COVER SYSTEM DETAIL
NTS



EXISTING ASPHALT COVER SYSTEM DETAIL
NTS



N

150' 0' 150' 300'

SCALE: 1 INCH = 150 FEET
SCALE IN FEET
(approximate)

DATE: NOVEMBER 2018
DRAFTED BY: RFL

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0421-017-001

SITE COVER SYSTEM

REMEDIAL ACTION WORK PLAN
1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK
PREPARED FOR
1827 FILLMORE LLC

FIGURE 4

APPENDIX A

BENCH-SCALE EVALUATION LABORATORY ANALYTICAL RESULTS (PRE- AND POST-TREATMENT)

ANALYTICAL REPORT

Lab Number:	L1844113
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Bryan Mayback
Phone:	(716) 856-0599
Project Name:	1827 FILLMORE AVE., BENCHSCALE
Project Number:	B0421-017-001 (009)
Report Date:	10/31/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Project Number: B0421-017-001 (009)

Lab Number: L1844113
Report Date: 10/31/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1844113-01	SB-21 PC-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 12:45	10/29/18
L1844113-02	TP-13 PC-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 12:55	10/29/18
L1844113-03	SB-21 PC-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 13:00	10/29/18
L1844113-04	TP-13 PC-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 13:10	10/29/18
L1844113-05	SB-21 PA-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 13:30	10/29/18
L1844113-06	TP-13 PA-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 13:35	10/29/18
L1844113-07	SB-21 PA-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 13:40	10/29/18
L1844113-08	TP-13 PA-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/29/18 13:45	10/29/18

Project Name:	1827 FILLMORE AVE., BENCHSCALE	**Lab Number:**	L1844113
Project Number:	B0421-017-001 (009)	**Report Date:**	10/31/18

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	1827 FILLMORE AVE., BENCHSCALE	**Lab Number:**	L1844113
Project Number:	B0421-017-001 (009)	**Report Date:**	10/31/18

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Amita Naik

Title: Technical Director/Representative Date: 10/31/18

METALS

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-01
Client ID: SB-21 PC-1
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 12:45
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 12:19	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-02
Client ID: TP-13 PC-1
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 12:55
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 12:24	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-03
Client ID: SB-21 PC-2
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 13:00
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.622		mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 11:07	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-04
Client ID: TP-13 PC-2
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 13:10
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 11:24	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-05
Client ID: SB-21 PA-1
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 13:30
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.088	J	mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 12:42	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-06
Client ID: TP-13 PA-1
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 13:35
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.080	J	mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 12:47	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-07
Client ID: SB-21 PA-2
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 13:40
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.044	J	mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 12:52	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Lab Number: L1844113
Project Number: B0421-017-001 (009)
Report Date: 10/31/18

SAMPLE RESULTS

Lab ID: L1844113-08
Client ID: TP-13 PA-2
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/29/18 13:45
Date Received: 10/29/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	ND		mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 12:56	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE., BENCHSCALE **Lab Number:** L1844113

Project Number: B0421-017-001 (009) **Report Date:** 10/31/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-02,05-08 Batch: WG1174244-1										
Lead, TCLP	ND		mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 10:58	1,6010D	PE

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 10/30/18 06:06

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 03-04 Batch: WG1174245-1										
Lead, TCLP	ND		mg/l	0.500	0.027	1	10/31/18 09:42	10/31/18 10:53	1,6010D	PE

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 10/30/18 06:06

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE., BENCHSCALE

Project Number: B0421-017-001 (009)

Lab Number: L1844113

Report Date: 10/31/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02,05-08 Batch: WG1174244-2								
Lead, TCLP	96		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 03-04 Batch: WG1174245-2								
Lead, TCLP	97		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Project Number: B0421-017-001 (009)

Lab Number: L1844113
Report Date: 10/31/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02,05-08 QC Batch ID: WG1174244-3 QC Sample: L1844093-01 Client ID: MS Sample												
Lead, TCLP	0.060J	5.1	4.86	95		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 03-04 QC Batch ID: WG1174245-3 QC Sample: L1844113-03 Client ID: SB-21 PC-2												
Lead, TCLP	0.622	5.1	5.54	96		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE., BENCHSCALE

Project Number: B0421-017-001 (009)

Lab Number: L1844113

Report Date: 10/31/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02,05-08 QC Batch ID: WG1174244-4 QC Sample: L1844093-01 Client ID: DUP Sample						
Lead, TCLP	0.060J	0.058J	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 03-04 QC Batch ID: WG1174245-4 QC Sample: L1844113-03 Client ID: SB-21 PC-2						
Lead, TCLP	0.622	0.600	mg/l	4		20

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Project Number: B0421-017-001 (009)

Lab Number: L1844113
Report Date: 10/31/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1844113-01A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1844113-01X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1844113-02A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1844113-02X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1844113-03A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-03X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1844113-03X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1844113-04A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-04X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1844113-04X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1844113-05A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-05X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1844113-05X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1844113-06A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-06X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1844113-06X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1844113-07A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-07X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1844113-07X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1844113-08A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1844113-08X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)

*Values in parentheses indicate holding time in days

Project Name: 1827 FILLMORE AVE., BENCHSCALE
Project Number: B0421-017-001 (009)

Lab Number: L1844113
Report Date: 10/31/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1844113-08X9	Tumble Vessel	A	NA		3.4	Y	Absent		-

*Values in parentheses indicate holding time in days

Project Name:	1827 FILLMORE AVE., BENCHSCALE	**Lab Number:**	L1844113
Project Number:	B0421-017-001 (009)	**Report Date:**	10/31/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE., BENCHSCALE	**Lab Number:**	L1844113
Project Number:	B0421-017-001 (009)	**Report Date:**	10/31/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE., BENCHSCALE	**Lab Number:**	L1844113
Project Number:	B0421-017-001 (009)	**Report Date:**	10/31/18

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page of

Date Rec'd in Lab: 10/30/18

ALPHA Job #: L1844113 / ~~L1844154~~

Client Information

Client: Benchmark Env Eng
Address: 2558 Hamburg Turnpike Buffalo NY 14218
Phone: 716-856-0599
Fax:
Email: bmayback@tunkyll.com

Project Information

Project Name: 1827 Fillmore Ave Benchscale Testing
Project Location: 1827 Fillmore Ave Buffalo NY
Project #: B0421-017-001 (009)
(Use Project name as Project #) ☐
Project Manager: Cindy Fox
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 2

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☐ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

TCLP Lead

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCLP Lead	Sample Specific Comments
44154 -01	SB-21 PC-1	10/29/18	1245	Soil	CCB	X	
-02	TP-13 PC-1		1255		CCB	X	
-03	SB-21 PC-2		1300		CCB	X	
-04	TP-13 PC-2		1310		CCB	X	
-05	SB-21 PA-1		1330		CCB	X	
-06	TP-13 PA-1		1335		CCB	X	
-07	SB-21 PA-2		1340		CCB	X	
-08	TP-13 PA-2		1345		CCB	X	

Container Type: A
Preservative: A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	10/29/18 1400	AAL	10/29/18 15:15
	10/29/18 16:30		10/30/18 0125

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1843362
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Bryan Mayback
Phone:	(716) 856-0599
Project Name:	1827 FILLMORE AVE-BENCH SCALE
Project Number:	B0421-017-001
Report Date:	10/26/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 1827 FILLMORE AVE-BENCH SCALE
Project Number: B0421-017-001

Lab Number: L1843362
Report Date: 10/26/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1843362-01	SB-21 (12-14) BS-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 09:35	10/24/18
L1843362-02	SB-21 (12-14) BS-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 09:35	10/24/18
L1843362-03	SB-21 (14-16) BS-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 09:30	10/24/18
L1843362-04	SB-21 (14-16) BS-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 09:30	10/24/18
L1843362-05	TP-13 (10-13) BS-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 10:00	10/24/18
L1843362-06	TP-13 (10-13) BS-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 10:00	10/24/18
L1843362-07	TP-13 (13-16) BS-1	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 10:10	10/24/18
L1843362-08	TP-13 (13-16) BS-2	SOIL	1827 FILLMORE AVE., BUFFALO, NY	10/24/18 10:10	10/24/18

Project Name:	1827 FILLMORE AVE-BENCH SCALE	**Lab Number:**	L1843362
Project Number:	B0421-017-001	**Report Date:**	10/26/18

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	1827 FILLMORE AVE-BENCH SCALE	**Lab Number:**	L1843362
Project Number:	B0421-017-001	**Report Date:**	10/26/18

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Amita Naik

Title: Technical Director/Representative Date: 10/26/18

METALS

Project Name: 1827 FILLMORE AVE-BENCH SCALE
Lab Number: L1843362
Project Number: B0421-017-001
Report Date: 10/26/18

SAMPLE RESULTS

Lab ID: L1843362-01
Client ID: SB-21 (12-14) BS-1
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/24/18 09:35
Date Received: 10/24/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/25/18 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	10.1		mg/l	0.500	0.027	1	10/26/18 08:08	10/26/18 09:41	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE-BENCH SCALE
Lab Number: L1843362
Project Number: B0421-017-001
Report Date: 10/26/18

SAMPLE RESULTS

Lab ID: L1843362-02
Client ID: SB-21 (12-14) BS-2
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/24/18 09:35
Date Received: 10/24/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/25/18 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	8.29		mg/l	0.500	0.027	1	10/26/18 08:08	10/26/18 09:59	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE-BENCH SCALE
Lab Number: L1843362
Project Number: B0421-017-001
Report Date: 10/26/18

SAMPLE RESULTS

Lab ID: L1843362-05
Client ID: TP-13 (10-13) BS-1
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/24/18 10:00
Date Received: 10/24/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/25/18 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	5.23		mg/l	0.500	0.027	1	10/26/18 08:08	10/26/18 10:04	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE-BENCH SCALE
Lab Number: L1843362
Project Number: B0421-017-001
Report Date: 10/26/18

SAMPLE RESULTS

Lab ID: L1843362-06
Client ID: TP-13 (10-13) BS-2
Sample Location: 1827 FILLMORE AVE., BUFFALO, NY
Sample Depth:
Matrix: Soil

Date Collected: 10/24/18 10:00
Date Received: 10/24/18
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 10/25/18 05:51

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	5.75		mg/l	0.500	0.027	1	10/26/18 08:08	10/26/18 10:08	EPA 3015	1,6010D	PE

Project Name: 1827 FILLMORE AVE-BENCH SCALE **Lab Number:** L1843362

Project Number: B0421-017-001 **Report Date:** 10/26/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-02,05-06 Batch: WG1172562-1										
Lead, TCLP	ND		mg/l	0.500	0.027	1	10/26/18 08:08	10/26/18 09:32	1,6010D	PE

Prep Information

Digestion Method: EPA 3015

TCLP/SPLP Extraction Date: 10/25/18 05:51

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE-BENCH SCALE

Project Number: B0421-017-001

Lab Number: L1843362

Report Date: 10/26/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02,05-06 Batch: WG1172562-2								
Lead, TCLP	97		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE-BENCH SCALE
Project Number: B0421-017-001

Lab Number: L1843362
Report Date: 10/26/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02,05-06 QC Batch ID: WG1172562-3 QC Sample: L1843362-01 Client ID: SB-21 (12-14) BS-1												
Lead, TCLP	10.1	5.1	14.9	94		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE-BENCH SCALE

Project Number: B0421-017-001

Lab Number: L1843362

Report Date: 10/26/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02,05-06 QC Batch ID: WG1172562-4 QC Sample: L1843362-01 Client ID: SB-21 (12-14) BS-1						
Lead, TCLP	10.1	9.97	mg/l	1		20

Project Name: 1827 FILLMORE AVE-BENCH SCALE
Project Number: B0421-017-001

Lab Number: L1843362
Report Date: 10/26/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1843362-01A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1843362-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1843362-01X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1843362-02A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1843362-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1843362-02X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1843362-03A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		HOLD-METAL(180)
L1843362-04A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		HOLD-METAL(180)
L1843362-05A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1843362-05X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1843362-05X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1843362-06A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		-
L1843362-06X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.4	Y	Absent		PB-CI(180)
L1843362-06X9	Tumble Vessel	A	NA		3.4	Y	Absent		-
L1843362-07A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		HOLD-METAL(180)
L1843362-08A	Glass 250ml/8oz unpreserved	A	NA		3.4	Y	Absent		HOLD-METAL(180)

*Values in parentheses indicate holding time in days

Project Name:	1827 FILLMORE AVE-BENCH SCALE	**Lab Number:**	L1843362
Project Number:	B0421-017-001	**Report Date:**	10/26/18

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE-BENCH SCALE	**Lab Number:**	L1843362
Project Number:	B0421-017-001	**Report Date:**	10/26/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE-BENCH SCALE	**Lab Number:**	L1843362
Project Number:	B0421-017-001	**Report Date:**	10/26/18

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page ___ of ___

Date Rec'd in Lab: 10/24/18

ALPHA Job #: L1843362

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information
Project Name: 1827 Fillmore Ave - Bench Scale Testing
Project Location: 1827 Fillmore Ave, Buffalo NY
Project #: B0421-2017-001 (009)
(Use Project name as Project #) ☐
Project Manager: Candy Fox
ALPHAQuote #:

Client Information
Client: Benchmark Env. Eng.
Address: 2558 Hamburg Turnpike, Buffalo NY 14218
Phone: 716-856-0599
Fax:
Email: bmayback@turnkeyllc.com

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 2

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS: TCLP Lead

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCLP Lead	Sample Specific Comments
43362-01	SB-21 (12-14) BS-1	10/24/18	935	Soil	CCB	X	
02	SB-21 (12-14) BS-2	↓	935	↓	CCB	X	
03	SB-21 (14-16) BS-1		930		CCB	X	HOLD
04	SB-21 (14-16) BS-2		930		CCB	X	HOLD
05	TP-13 (10-13) BS-1		1000		CCB	X	
06	TP-13 (10-13) BS-2		1000		CCB	X	
07	TP-13 (13-16) BS-1		1010		CCB	X	HOLD
08	TP-13 (13-16) BS-2		1010		CCB	X	HOLD

Container Type: A
Preservative: A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/24/18 11:30	J. Hoosin AAL	10/24/18 12:28
J. Hoosin AAL	10/24/18 13:30	Danielle Mott	10/24/18 22:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX B

SOIL MOUNDS CHARACTERIZATION LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

Lab Number:	L1835442
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Bryan Mayback
Phone:	(716) 856-0599
Project Name:	1827 FILLMORE AVE.
Project Number:	B0421-017-001
Report Date:	09/14/18

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1835442-01	PILE 1 VOC-1	SOIL	1827 FILLMORE AVE.	09/07/18 06:15	09/07/18
L1835442-02	PILE 1 VOC-2	SOIL	1827 FILLMORE AVE.	09/07/18 06:30	09/07/18
L1835442-03	PILE 1 VOC-3	SOIL	1827 FILLMORE AVE.	09/07/18 07:15	09/07/18
L1835442-04	PILE 1 VOC-4	SOIL	1827 FILLMORE AVE.	09/07/18 07:20	09/07/18
L1835442-05	PILE 1 VOC-5	SOIL	1827 FILLMORE AVE.	09/07/18 07:25	09/07/18
L1835442-06	PILE 1 VOC-6	SOIL	1827 FILLMORE AVE.	09/07/18 07:35	09/07/18
L1835442-07	PILE 1 VOC-7	SOIL	1827 FILLMORE AVE.	09/07/18 07:45	09/07/18
L1835442-08	PILE 1 VOC-8	SOIL	1827 FILLMORE AVE.	09/07/18 07:55	09/07/18
L1835442-09	PILE 1 VOC-9	SOIL	1827 FILLMORE AVE.	09/07/18 08:05	09/07/18
L1835442-10	PILE 1 VOC-10	SOIL	1827 FILLMORE AVE.	09/07/18 08:15	09/07/18
L1835442-11	PILE 1 VOC-11	SOIL	1827 FILLMORE AVE.	09/07/18 08:45	09/07/18
L1835442-12	PILE 1 VOC-12	SOIL	1827 FILLMORE AVE.	09/07/18 09:15	09/07/18
L1835442-13	PILE 1 VOC-13	SOIL	1827 FILLMORE AVE.	09/07/18 09:45	09/07/18
L1835442-14	PILE 1 VOC-14	SOIL	1827 FILLMORE AVE.	09/07/18 10:15	09/07/18
L1835442-15	PILE 1 VOC-15	SOIL	1827 FILLMORE AVE.	09/07/18 10:45	09/07/18
L1835442-16	PILE 1 VOC-16	SOIL	1827 FILLMORE AVE.	09/07/18 11:05	09/07/18
L1835442-17	PILE 1 VOC-17	SOIL	1827 FILLMORE AVE.	09/07/18 11:10	09/07/18
L1835442-18	PILE 1 COMP-1	SOIL	1827 FILLMORE AVE.	09/07/18 07:00	09/07/18
L1835442-19	PILE 1 COMP-2	SOIL	1827 FILLMORE AVE.	09/07/18 07:30	09/07/18
L1835442-20	PILE 1 COMP-3	SOIL	1827 FILLMORE AVE.	09/07/18 08:00	09/07/18
L1835442-21	PILE 1 COMP-4	SOIL	1827 FILLMORE AVE.	09/07/18 08:30	09/07/18
L1835442-22	PILE 1 COMP-5	SOIL	1827 FILLMORE AVE.	09/07/18 09:00	09/07/18
L1835442-23	PILE 1 COMP-6	SOIL	1827 FILLMORE AVE.	09/07/18 10:00	09/07/18
L1835442-24	PILE 1 COMP-7	SOIL	1827 FILLMORE AVE.	09/07/18 11:00	09/07/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1835442-25	PILE 2 VOC-1	SOIL	1827 FILLMORE AVE.	09/07/18 11:15	09/07/18
L1835442-26	PILE 2 VOC-2	SOIL	1827 FILLMORE AVE.	09/07/18 11:20	09/07/18
L1835442-27	PILE 2 VOC-3	SOIL	1827 FILLMORE AVE.	09/07/18 11:25	09/07/18
L1835442-28	PILE 2 VOC-4	SOIL	1827 FILLMORE AVE.	09/07/18 11:35	09/07/18
L1835442-29	PILE 2 VOC-5	SOIL	1827 FILLMORE AVE.	09/07/18 11:45	09/07/18
L1835442-30	PILE 2 COMP-1	SOIL	1827 FILLMORE AVE.	09/07/18 12:00	09/07/18
L1835442-31	PILE 2 COMP-2	SOIL	1827 FILLMORE AVE.	09/07/18 11:30	09/07/18

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442
Project Number: B0421-017-001 **Report Date:** 09/14/18

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442
Project Number: B0421-017-001 **Report Date:** 09/14/18

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L1835442-01 through -17, and -25 through -29: Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.
L1835442-27: The internal standard (IS) response for 1,4-dichlorobenzene-d4 (44%) and the surrogate recovery for 4-bromofluorobenzene (138%) were outside the acceptance criteria; however, re-analysis achieved similar results: 1,4-dichlorobenzene-d4 (46%) and 4-bromofluorobenzene (134%). The results of both analyses are reported.

Semivolatile Organics

L1835442-31: The sample has elevated detection limits due to the dilution required by the sample matrix.

Pesticides

L1835442-31: The sample has elevated detection limits due to the dilution required by the sample matrix.

Cyanide, Total

The WG1155533-2/-3 LCS/LCSD recoveries (72%/45%), associated with L1835442-18 through -24, -30 and -31, are outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.
The WG1155533-2/-3 LCS/LCSD RPD (48%), associated with L1835442-18 through -24, -30 and -31, is above the acceptance criteria.

Hexavalent Chromium

The WG1155857-4 Insoluble MS recovery (48%), performed on L1835442-22, is outside the acceptance criteria. The Soluble MS recovery (35%) was also outside criteria. This has been attributed to matrix

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1835442
Project Number:	B0421-017-001	**Report Date:**	09/14/18

Case Narrative (continued)

interference. A post-spike was performed with a recovery of 103%.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 09/14/18

ORGANICS

VOLATILES

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-01
Client ID: PILE 1 VOC-1
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 06:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/12/18 23:11
Analyst: JC
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.9	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.97	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	0.97	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.97	0.12	1
Dibromochloromethane	ND		ug/kg	0.97	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.97	0.26	1
Tetrachloroethene	ND		ug/kg	0.49	0.19	1
Chlorobenzene	ND		ug/kg	0.49	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.68	1
1,2-Dichloroethane	ND		ug/kg	0.97	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.49	0.16	1
Bromodichloromethane	ND		ug/kg	0.49	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	0.97	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.49	0.15	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.49	0.16	1
Benzene	ND		ug/kg	0.49	0.16	1
Toluene	ND		ug/kg	0.97	0.53	1
Ethylbenzene	ND		ug/kg	0.97	0.14	1
Chloromethane	ND		ug/kg	3.9	0.91	1
Bromomethane	ND		ug/kg	1.9	0.56	1
Vinyl chloride	ND		ug/kg	0.97	0.33	1
Chloroethane	ND		ug/kg	1.9	0.44	1
1,1-Dichloroethene	ND		ug/kg	0.97	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.13	1
Trichloroethene	ND		ug/kg	0.49	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-01 Date Collected: 09/07/18 06:15

Client ID: PILE 1 VOC-1 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.17	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.20	1
p/m-Xylene	ND		ug/kg	1.9	0.54	1
o-Xylene	ND		ug/kg	0.97	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.97	0.17	1
Styrene	ND		ug/kg	0.97	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.7	0.89	1
Acetone	ND		ug/kg	9.7	4.7	1
Carbon disulfide	ND		ug/kg	9.7	4.4	1
2-Butanone	ND		ug/kg	9.7	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	9.7	1.2	1
2-Hexanone	ND		ug/kg	9.7	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.97	0.27	1
n-Butylbenzene	ND		ug/kg	0.97	0.16	1
sec-Butylbenzene	ND		ug/kg	0.97	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.97	1
Isopropylbenzene	ND		ug/kg	0.97	0.11	1
p-Isopropyltoluene	ND		ug/kg	0.97	0.11	1
n-Propylbenzene	ND		ug/kg	0.97	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
Methyl Acetate	ND		ug/kg	3.9	0.92	1
Cyclohexane	ND		ug/kg	9.7	0.53	1
1,4-Dioxane	ND		ug/kg	97	34.	1
Freon-113	ND		ug/kg	3.9	0.68	1
Methyl cyclohexane	ND		ug/kg	3.9	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	110		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	97		70-130

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-02
Client ID: PILE 1 VOC-2
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 06:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/12/18 23:39
Analyst: JC
Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.5	2.0	1
1,1-Dichloroethane	ND		ug/kg	0.89	0.13	1
Chloroform	ND		ug/kg	1.3	0.12	1
Carbon tetrachloride	ND		ug/kg	0.89	0.20	1
1,2-Dichloropropane	ND		ug/kg	0.89	0.11	1
Dibromochloromethane	ND		ug/kg	0.89	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	0.89	0.24	1
Tetrachloroethene	ND		ug/kg	0.45	0.18	1
Chlorobenzene	ND		ug/kg	0.45	0.11	1
Trichlorofluoromethane	ND		ug/kg	3.6	0.62	1
1,2-Dichloroethane	ND		ug/kg	0.89	0.23	1
1,1,1-Trichloroethane	ND		ug/kg	0.45	0.15	1
Bromodichloromethane	ND		ug/kg	0.45	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.89	0.24	1
cis-1,3-Dichloropropene	ND		ug/kg	0.45	0.14	1
Bromoform	ND		ug/kg	3.6	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.45	0.15	1
Benzene	ND		ug/kg	0.45	0.15	1
Toluene	ND		ug/kg	0.89	0.48	1
Ethylbenzene	ND		ug/kg	0.89	0.13	1
Chloromethane	ND		ug/kg	3.6	0.83	1
Bromomethane	ND		ug/kg	1.8	0.52	1
Vinyl chloride	ND		ug/kg	0.89	0.30	1
Chloroethane	ND		ug/kg	1.8	0.40	1
1,1-Dichloroethene	ND		ug/kg	0.89	0.21	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.12	1
Trichloroethene	ND		ug/kg	0.45	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	1.8	0.13	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-02 Date Collected: 09/07/18 06:30

Client ID: PILE 1 VOC-2 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.8	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	1.8	0.15	1
Methyl tert butyl ether	ND		ug/kg	1.8	0.18	1
p/m-Xylene	ND		ug/kg	1.8	0.50	1
o-Xylene	ND		ug/kg	0.89	0.26	1
cis-1,2-Dichloroethene	ND		ug/kg	0.89	0.16	1
Styrene	ND		ug/kg	0.89	0.18	1
Dichlorodifluoromethane	ND		ug/kg	8.9	0.82	1
Acetone	ND		ug/kg	8.9	4.3	1
Carbon disulfide	ND		ug/kg	8.9	4.1	1
2-Butanone	ND		ug/kg	8.9	2.0	1
4-Methyl-2-pentanone	ND		ug/kg	8.9	1.1	1
2-Hexanone	ND		ug/kg	8.9	1.0	1
Bromochloromethane	ND		ug/kg	1.8	0.18	1
1,2-Dibromoethane	ND		ug/kg	0.89	0.25	1
n-Butylbenzene	ND		ug/kg	0.89	0.15	1
sec-Butylbenzene	ND		ug/kg	0.89	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.7	0.89	1
Isopropylbenzene	ND		ug/kg	0.89	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.89	0.10	1
n-Propylbenzene	ND		ug/kg	0.89	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.8	0.29	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.8	0.24	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.8	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.8	0.30	1
Methyl Acetate	ND		ug/kg	3.6	0.85	1
Cyclohexane	ND		ug/kg	8.9	0.49	1
1,4-Dioxane	ND		ug/kg	89	31.	1
Freon-113	ND		ug/kg	3.6	0.62	1
Methyl cyclohexane	ND		ug/kg	3.6	0.54	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	96		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-03
Client ID: PILE 1 VOC-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 00:07
Analyst: JC
Percent Solids: 95%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.5	2.1	1
1,1-Dichloroethane	ND		ug/kg	0.91	0.13	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.91	0.21	1
1,2-Dichloropropane	ND		ug/kg	0.91	0.11	1
Dibromochloromethane	ND		ug/kg	0.91	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.91	0.24	1
Tetrachloroethene	ND		ug/kg	0.45	0.18	1
Chlorobenzene	ND		ug/kg	0.45	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.6	0.63	1
1,2-Dichloroethane	ND		ug/kg	0.91	0.23	1
1,1,1-Trichloroethane	ND		ug/kg	0.45	0.15	1
Bromodichloromethane	ND		ug/kg	0.45	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.91	0.25	1
cis-1,3-Dichloropropene	ND		ug/kg	0.45	0.14	1
Bromoform	ND		ug/kg	3.6	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.45	0.15	1
Benzene	ND		ug/kg	0.45	0.15	1
Toluene	ND		ug/kg	0.91	0.49	1
Ethylbenzene	ND		ug/kg	0.91	0.13	1
Chloromethane	ND		ug/kg	3.6	0.85	1
Bromomethane	ND		ug/kg	1.8	0.53	1
Vinyl chloride	ND		ug/kg	0.91	0.30	1
Chloroethane	ND		ug/kg	1.8	0.41	1
1,1-Dichloroethene	ND		ug/kg	0.91	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.12	1
Trichloroethene	ND		ug/kg	0.45	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	1.8	0.13	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-03 Date Collected: 09/07/18 07:15

Client ID: PILE 1 VOC-3 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.8	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	1.8	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.8	0.18	1
p/m-Xylene	ND		ug/kg	1.8	0.51	1
o-Xylene	ND		ug/kg	0.91	0.26	1
cis-1,2-Dichloroethene	ND		ug/kg	0.91	0.16	1
Styrene	ND		ug/kg	0.91	0.18	1
Dichlorodifluoromethane	ND		ug/kg	9.1	0.83	1
Acetone	ND		ug/kg	9.1	4.4	1
Carbon disulfide	ND		ug/kg	9.1	4.1	1
2-Butanone	ND		ug/kg	9.1	2.0	1
4-Methyl-2-pentanone	ND		ug/kg	9.1	1.2	1
2-Hexanone	ND		ug/kg	9.1	1.1	1
Bromochloromethane	ND		ug/kg	1.8	0.19	1
1,2-Dibromoethane	ND		ug/kg	0.91	0.25	1
n-Butylbenzene	ND		ug/kg	0.91	0.15	1
sec-Butylbenzene	ND		ug/kg	0.91	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.7	0.91	1
Isopropylbenzene	ND		ug/kg	0.91	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.91	0.10	1
n-Propylbenzene	ND		ug/kg	0.91	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.8	0.29	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.8	0.25	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.8	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.8	0.30	1
Methyl Acetate	ND		ug/kg	3.6	0.86	1
Cyclohexane	ND		ug/kg	9.1	0.49	1
1,4-Dioxane	ND		ug/kg	91	32.	1
Freon-113	ND		ug/kg	3.6	0.63	1
Methyl cyclohexane	ND		ug/kg	3.6	0.55	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	114		70-130
4-Bromofluorobenzene	125		70-130
Dibromofluoromethane	96		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-04
Client ID: PILE 1 VOC-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:20
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/14/18 12:18
Analyst: JC
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	6.2	2.9	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.18	1
Chloroform	ND		ug/kg	1.9	0.18	1
Carbon tetrachloride	ND		ug/kg	1.2	0.29	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.16	1
Dibromochloromethane	ND		ug/kg	1.2	0.18	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.33	1
Tetrachloroethene	ND		ug/kg	0.62	0.24	1
Chlorobenzene	ND		ug/kg	0.62	0.16	1
Trichlorofluoromethane	ND		ug/kg	5.0	0.87	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.32	1
1,1,1-Trichloroethane	ND		ug/kg	0.62	0.21	1
Bromodichloromethane	ND		ug/kg	0.62	0.14	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.34	1
cis-1,3-Dichloropropene	ND		ug/kg	0.62	0.20	1
Bromoform	ND		ug/kg	5.0	0.31	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.62	0.21	1
Benzene	ND		ug/kg	0.62	0.21	1
Toluene	ND		ug/kg	1.2	0.68	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	5.0	1.2	1
Bromomethane	ND		ug/kg	2.5	0.73	1
Vinyl chloride	ND		ug/kg	1.2	0.42	1
Chloroethane	ND		ug/kg	2.5	0.56	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.30	1
trans-1,2-Dichloroethene	ND		ug/kg	1.9	0.17	1
Trichloroethene	ND		ug/kg	0.62	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	2.5	0.18	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-04 Date Collected: 09/07/18 07:20

Client ID: PILE 1 VOC-4 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.5	0.21	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.25	1
p/m-Xylene	ND		ug/kg	2.5	0.70	1
o-Xylene	ND		ug/kg	1.2	0.36	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.22	1
Styrene	ND		ug/kg	1.2	0.24	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	6.0	1
Carbon disulfide	ND		ug/kg	12	5.7	1
2-Butanone	ND		ug/kg	12	2.8	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.6	1
2-Hexanone	ND		ug/kg	12	1.5	1
Bromochloromethane	ND		ug/kg	2.5	0.26	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.35	1
n-Butylbenzene	ND		ug/kg	1.2	0.21	1
sec-Butylbenzene	ND		ug/kg	1.2	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.8	1.2	1
Isopropylbenzene	ND		ug/kg	1.2	0.14	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.14	1
n-Propylbenzene	ND		ug/kg	1.2	0.21	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.5	0.40	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.5	0.34	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.5	0.24	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.5	0.42	1
Methyl Acetate	ND		ug/kg	5.0	1.2	1
Cyclohexane	ND		ug/kg	12	0.68	1
1,4-Dioxane	ND		ug/kg	120	44.	1
Freon-113	ND		ug/kg	5.0	0.87	1
Methyl cyclohexane	ND		ug/kg	5.0	0.75	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	95		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-05
Client ID: PILE 1 VOC-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:25
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 00:34
Analyst: JC
Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	5.5	2.5	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Chloroform	ND		ug/kg	1.7	0.15	1
Carbon tetrachloride	ND		ug/kg	1.1	0.25	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.14	1
Dibromochloromethane	ND		ug/kg	1.1	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.30	1
Tetrachloroethene	ND		ug/kg	0.55	0.22	1
Chlorobenzene	ND		ug/kg	0.55	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.4	0.77	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.28	1
1,1,1-Trichloroethane	ND		ug/kg	0.55	0.18	1
Bromodichloromethane	ND		ug/kg	0.55	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.30	1
cis-1,3-Dichloropropene	ND		ug/kg	0.55	0.17	1
Bromoform	ND		ug/kg	4.4	0.27	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.55	0.18	1
Benzene	ND		ug/kg	0.55	0.18	1
Toluene	ND		ug/kg	1.1	0.60	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Chloromethane	ND		ug/kg	4.4	1.0	1
Bromomethane	ND		ug/kg	2.2	0.64	1
Vinyl chloride	ND		ug/kg	1.1	0.37	1
Chloroethane	ND		ug/kg	2.2	0.50	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.26	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.15	1
Trichloroethene	ND		ug/kg	0.55	0.15	1
1,2-Dichlorobenzene	ND		ug/kg	2.2	0.16	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-05 Date Collected: 09/07/18 07:25

Client ID: PILE 1 VOC-5 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.2	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.2	0.19	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.22	1
p/m-Xylene	ND		ug/kg	2.2	0.62	1
o-Xylene	ND		ug/kg	1.1	0.32	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
Styrene	ND		ug/kg	1.1	0.22	1
Dichlorodifluoromethane	ND		ug/kg	11	1.0	1
Acetone	ND		ug/kg	11	5.3	1
Carbon disulfide	ND		ug/kg	11	5.0	1
2-Butanone	ND		ug/kg	11	2.4	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
2-Hexanone	ND		ug/kg	11	1.3	1
Bromochloromethane	ND		ug/kg	2.2	0.23	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.31	1
n-Butylbenzene	ND		ug/kg	1.1	0.18	1
sec-Butylbenzene	ND		ug/kg	1.1	0.16	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.3	1.1	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
n-Propylbenzene	ND		ug/kg	1.1	0.19	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.2	0.36	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.2	0.30	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.2	0.21	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.2	0.37	1
Methyl Acetate	ND		ug/kg	4.4	1.0	1
Cyclohexane	ND		ug/kg	11	0.60	1
1,4-Dioxane	ND		ug/kg	110	39.	1
Freon-113	ND		ug/kg	4.4	0.77	1
Methyl cyclohexane	ND		ug/kg	4.4	0.67	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	111		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	96		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-06
Client ID: PILE 1 VOC-6
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:35
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 01:02
Analyst: JC
Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.6	2.1	1
1,1-Dichloroethane	ND		ug/kg	0.93	0.13	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.93	0.21	1
1,2-Dichloropropane	ND		ug/kg	0.93	0.12	1
Dibromochloromethane	ND		ug/kg	0.93	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.93	0.25	1
Tetrachloroethene	ND		ug/kg	0.46	0.18	1
Chlorobenzene	ND		ug/kg	0.46	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.7	0.64	1
1,2-Dichloroethane	ND		ug/kg	0.93	0.24	1
1,1,1-Trichloroethane	ND		ug/kg	0.46	0.15	1
Bromodichloromethane	ND		ug/kg	0.46	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.93	0.25	1
cis-1,3-Dichloropropene	ND		ug/kg	0.46	0.15	1
Bromoform	ND		ug/kg	3.7	0.23	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.46	0.15	1
Benzene	ND		ug/kg	0.46	0.15	1
Toluene	ND		ug/kg	0.93	0.50	1
Ethylbenzene	ND		ug/kg	0.93	0.13	1
Chloromethane	ND		ug/kg	3.7	0.86	1
Bromomethane	ND		ug/kg	1.8	0.54	1
Vinyl chloride	ND		ug/kg	0.93	0.31	1
Chloroethane	ND		ug/kg	1.8	0.42	1
1,1-Dichloroethene	ND		ug/kg	0.93	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1
Trichloroethene	ND		ug/kg	0.46	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.8	0.13	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-06 Date Collected: 09/07/18 07:35

Client ID: PILE 1 VOC-6 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.8	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.8	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.8	0.19	1
p/m-Xylene	ND		ug/kg	1.8	0.52	1
o-Xylene	ND		ug/kg	0.93	0.27	1
cis-1,2-Dichloroethene	ND		ug/kg	0.93	0.16	1
Styrene	ND		ug/kg	0.93	0.18	1
Dichlorodifluoromethane	ND		ug/kg	9.3	0.85	1
Acetone	ND		ug/kg	9.3	4.5	1
Carbon disulfide	ND		ug/kg	9.3	4.2	1
2-Butanone	ND		ug/kg	9.3	2.0	1
4-Methyl-2-pentanone	ND		ug/kg	9.3	1.2	1
2-Hexanone	ND		ug/kg	9.3	1.1	1
Bromochloromethane	ND		ug/kg	1.8	0.19	1
1,2-Dibromoethane	ND		ug/kg	0.93	0.26	1
n-Butylbenzene	ND		ug/kg	0.93	0.15	1
sec-Butylbenzene	ND		ug/kg	0.93	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.8	0.92	1
Isopropylbenzene	ND		ug/kg	0.93	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.93	0.10	1
n-Propylbenzene	ND		ug/kg	0.93	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.8	0.30	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.8	0.25	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.8	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.8	0.31	1
Methyl Acetate	ND		ug/kg	3.7	0.88	1
Cyclohexane	ND		ug/kg	9.3	0.50	1
1,4-Dioxane	ND		ug/kg	93	32.	1
Freon-113	ND		ug/kg	3.7	0.64	1
Methyl cyclohexane	ND		ug/kg	3.7	0.56	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	97		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-07
Client ID: PILE 1 VOC-7
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 13:16
Analyst: MKS
Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.0	1.8	1
1,1-Dichloroethane	ND		ug/kg	0.81	0.12	1
Chloroform	ND		ug/kg	1.2	0.11	1
Carbon tetrachloride	ND		ug/kg	0.81	0.19	1
1,2-Dichloropropane	ND		ug/kg	0.81	0.10	1
Dibromochloromethane	ND		ug/kg	0.81	0.11	1
1,1,2-Trichloroethane	ND		ug/kg	0.81	0.22	1
Tetrachloroethene	ND		ug/kg	0.40	0.16	1
Chlorobenzene	ND		ug/kg	0.40	0.10	1
Trichlorofluoromethane	ND		ug/kg	3.2	0.56	1
1,2-Dichloroethane	ND		ug/kg	0.81	0.21	1
1,1,1-Trichloroethane	ND		ug/kg	0.40	0.14	1
Bromodichloromethane	ND		ug/kg	0.40	0.09	1
trans-1,3-Dichloropropene	ND		ug/kg	0.81	0.22	1
cis-1,3-Dichloropropene	ND		ug/kg	0.40	0.13	1
Bromoform	ND		ug/kg	3.2	0.20	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.40	0.13	1
Benzene	ND		ug/kg	0.40	0.13	1
Toluene	ND		ug/kg	0.81	0.44	1
Ethylbenzene	ND		ug/kg	0.81	0.11	1
Chloromethane	ND		ug/kg	3.2	0.76	1
Bromomethane	ND		ug/kg	1.6	0.47	1
Vinyl chloride	ND		ug/kg	0.81	0.27	1
Chloroethane	ND		ug/kg	1.6	0.37	1
1,1-Dichloroethene	ND		ug/kg	0.81	0.19	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.11	1
Trichloroethene	ND		ug/kg	0.40	0.11	1
1,2-Dichlorobenzene	ND		ug/kg	1.6	0.12	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-07 Date Collected: 09/07/18 07:45

Client ID: PILE 1 VOC-7 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.6	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	1.6	0.14	1
Methyl tert butyl ether	ND		ug/kg	1.6	0.16	1
p/m-Xylene	ND		ug/kg	1.6	0.45	1
o-Xylene	ND		ug/kg	0.81	0.24	1
cis-1,2-Dichloroethene	ND		ug/kg	0.81	0.14	1
Styrene	ND		ug/kg	0.81	0.16	1
Dichlorodifluoromethane	ND		ug/kg	8.1	0.74	1
Acetone	ND		ug/kg	8.1	3.9	1
Carbon disulfide	ND		ug/kg	8.1	3.7	1
2-Butanone	ND		ug/kg	8.1	1.8	1
4-Methyl-2-pentanone	ND		ug/kg	8.1	1.0	1
2-Hexanone	ND		ug/kg	8.1	0.96	1
Bromochloromethane	ND		ug/kg	1.6	0.17	1
1,2-Dibromoethane	ND		ug/kg	0.81	0.23	1
n-Butylbenzene	ND		ug/kg	0.81	0.14	1
sec-Butylbenzene	ND		ug/kg	0.81	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.4	0.81	1
Isopropylbenzene	ND		ug/kg	0.81	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.81	0.09	1
n-Propylbenzene	ND		ug/kg	0.81	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.6	0.26	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.6	0.22	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.6	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.6	0.27	1
Methyl Acetate	ND		ug/kg	3.2	0.77	1
Cyclohexane	ND		ug/kg	8.1	0.44	1
1,4-Dioxane	ND		ug/kg	81	28.	1
Freon-113	ND		ug/kg	3.2	0.56	1
Methyl cyclohexane	ND		ug/kg	3.2	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	104		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-08
Client ID: PILE 1 VOC-8
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:55
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 13:42
Analyst: MKS
Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.8	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.97	0.14	1
Chloroform	ND		ug/kg	1.4	0.14	1
Carbon tetrachloride	ND		ug/kg	0.97	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.97	0.12	1
Dibromochloromethane	ND		ug/kg	0.97	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.97	0.26	1
Tetrachloroethene	ND		ug/kg	0.48	0.19	1
Chlorobenzene	ND		ug/kg	0.48	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.67	1
1,2-Dichloroethane	ND		ug/kg	0.97	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Bromodichloromethane	ND		ug/kg	0.48	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.97	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.48	0.15	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.48	0.16	1
Benzene	ND		ug/kg	0.48	0.16	1
Toluene	ND		ug/kg	0.97	0.52	1
Ethylbenzene	ND		ug/kg	0.97	0.14	1
Chloromethane	ND		ug/kg	3.9	0.90	1
Bromomethane	ND		ug/kg	1.9	0.56	1
Vinyl chloride	ND		ug/kg	0.97	0.32	1
Chloroethane	ND		ug/kg	1.9	0.44	1
1,1-Dichloroethene	ND		ug/kg	0.97	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1
Trichloroethene	ND		ug/kg	0.48	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-08 Date Collected: 09/07/18 07:55

Client ID: PILE 1 VOC-8 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.19	1
p/m-Xylene	ND		ug/kg	1.9	0.54	1
o-Xylene	ND		ug/kg	0.97	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.97	0.17	1
Styrene	ND		ug/kg	0.97	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.7	0.88	1
Acetone	ND		ug/kg	9.7	4.6	1
Carbon disulfide	ND		ug/kg	9.7	4.4	1
2-Butanone	ND		ug/kg	9.7	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.7	1.2	1
2-Hexanone	ND		ug/kg	9.7	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.97	0.27	1
n-Butylbenzene	ND		ug/kg	0.97	0.16	1
sec-Butylbenzene	ND		ug/kg	0.97	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.97	1
Isopropylbenzene	ND		ug/kg	0.97	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.97	0.10	1
n-Propylbenzene	ND		ug/kg	0.97	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
Methyl Acetate	ND		ug/kg	3.9	0.92	1
Cyclohexane	ND		ug/kg	9.7	0.53	1
1,4-Dioxane	ND		ug/kg	97	34.	1
Freon-113	ND		ug/kg	3.9	0.67	1
Methyl cyclohexane	ND		ug/kg	3.9	0.58	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**145**	Q	70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	108		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-09
Client ID: PILE 1 VOC-9
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:05
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 20:09
Analyst: AD
Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	3.2	1.5	1
1,1-Dichloroethane	ND		ug/kg	0.64	0.09	1
Chloroform	ND		ug/kg	0.96	0.09	1
Carbon tetrachloride	ND		ug/kg	0.64	0.15	1
1,2-Dichloropropane	ND		ug/kg	0.64	0.08	1
Dibromochloromethane	ND		ug/kg	0.64	0.09	1
1,1,2-Trichloroethane	ND		ug/kg	0.64	0.17	1
Tetrachloroethene	ND		ug/kg	0.32	0.12	1
Chlorobenzene	ND		ug/kg	0.32	0.08	1
Trichlorofluoromethane	ND		ug/kg	2.6	0.44	1
1,2-Dichloroethane	ND		ug/kg	0.64	0.16	1
1,1,1-Trichloroethane	ND		ug/kg	0.32	0.11	1
Bromodichloromethane	ND		ug/kg	0.32	0.07	1
trans-1,3-Dichloropropene	ND		ug/kg	0.64	0.17	1
cis-1,3-Dichloropropene	ND		ug/kg	0.32	0.10	1
Bromoform	ND		ug/kg	2.6	0.16	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.32	0.11	1
Benzene	ND		ug/kg	0.32	0.11	1
Toluene	ND		ug/kg	0.64	0.35	1
Ethylbenzene	ND		ug/kg	0.64	0.09	1
Chloromethane	ND		ug/kg	2.6	0.60	1
Bromomethane	ND		ug/kg	1.3	0.37	1
Vinyl chloride	ND		ug/kg	0.64	0.21	1
Chloroethane	ND		ug/kg	1.3	0.29	1
1,1-Dichloroethene	ND		ug/kg	0.64	0.15	1
trans-1,2-Dichloroethene	ND		ug/kg	0.96	0.09	1
Trichloroethene	ND		ug/kg	0.32	0.09	1
1,2-Dichlorobenzene	ND		ug/kg	1.3	0.09	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-09 Date Collected: 09/07/18 08:05

Client ID: PILE 1 VOC-9 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.3	0.09	1
1,4-Dichlorobenzene	ND		ug/kg	1.3	0.11	1
Methyl tert butyl ether	ND		ug/kg	1.3	0.13	1
p/m-Xylene	ND		ug/kg	1.3	0.36	1
o-Xylene	ND		ug/kg	0.64	0.18	1
cis-1,2-Dichloroethene	ND		ug/kg	0.64	0.11	1
Styrene	ND		ug/kg	0.64	0.12	1
Dichlorodifluoromethane	ND		ug/kg	6.4	0.58	1
Acetone	ND		ug/kg	6.4	3.1	1
Carbon disulfide	ND		ug/kg	6.4	2.9	1
2-Butanone	ND		ug/kg	6.4	1.4	1
4-Methyl-2-pentanone	ND		ug/kg	6.4	0.82	1
2-Hexanone	ND		ug/kg	6.4	0.75	1
Bromochloromethane	ND		ug/kg	1.3	0.13	1
1,2-Dibromoethane	ND		ug/kg	0.64	0.18	1
n-Butylbenzene	ND		ug/kg	0.64	0.11	1
sec-Butylbenzene	ND		ug/kg	0.64	0.09	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	1.9	0.64	1
Isopropylbenzene	ND		ug/kg	0.64	0.07	1
p-Isopropyltoluene	ND		ug/kg	0.64	0.07	1
n-Propylbenzene	ND		ug/kg	0.64	0.11	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.3	0.20	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.3	0.17	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.3	0.12	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.3	0.21	1
Methyl Acetate	ND		ug/kg	2.6	0.61	1
Cyclohexane	ND		ug/kg	6.4	0.35	1
1,4-Dioxane	ND		ug/kg	64	22.	1
Freon-113	ND		ug/kg	2.6	0.44	1
Methyl cyclohexane	ND		ug/kg	2.6	0.38	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	98		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-10
Client ID: PILE 1 VOC-10
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 02:30
Analyst: JC
Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.7	J	ug/kg	5.3	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.28	1
Tetrachloroethene	ND		ug/kg	0.53	0.21	1
Chlorobenzene	ND		ug/kg	0.53	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.2	0.74	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Bromodichloromethane	ND		ug/kg	0.53	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	0.17	1
Bromoform	ND		ug/kg	4.2	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	0.18	1
Benzene	ND		ug/kg	0.53	0.18	1
Toluene	ND		ug/kg	1.0	0.57	1
Ethylbenzene	ND		ug/kg	1.0	0.15	1
Chloromethane	ND		ug/kg	4.2	0.98	1
Bromomethane	ND		ug/kg	2.1	0.61	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
Chloroethane	ND		ug/kg	2.1	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1
Trichloroethene	ND		ug/kg	0.53	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-10 Date Collected: 09/07/18 08:15

Client ID: PILE 1 VOC-10 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	ND		ug/kg	2.1	0.59	1
o-Xylene	ND		ug/kg	1.0	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
Styrene	ND		ug/kg	1.0	0.21	1
Dichlorodifluoromethane	ND		ug/kg	10	0.97	1
Acetone	ND		ug/kg	10	5.1	1
Carbon disulfide	ND		ug/kg	10	4.8	1
2-Butanone	ND		ug/kg	10	2.3	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.4	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.1	0.22	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.30	1
n-Butylbenzene	ND		ug/kg	1.0	0.18	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.0	1
Isopropylbenzene	ND		ug/kg	1.0	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.12	1
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	0.34	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	0.35	1
Methyl Acetate	ND		ug/kg	4.2	1.0	1
Cyclohexane	ND		ug/kg	10	0.58	1
1,4-Dioxane	ND		ug/kg	100	37.	1
Freon-113	ND		ug/kg	4.2	0.73	1
Methyl cyclohexane	ND		ug/kg	4.2	0.64	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	94		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-11
Client ID: PILE 1 VOC-11
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 14:08
Analyst: MKS
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	5.6	2.6	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Chloroform	ND		ug/kg	1.7	0.16	1
Carbon tetrachloride	ND		ug/kg	1.1	0.26	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.14	1
Dibromochloromethane	ND		ug/kg	1.1	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.30	1
Tetrachloroethene	ND		ug/kg	0.56	0.22	1
Chlorobenzene	ND		ug/kg	0.56	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.5	0.78	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.29	1
1,1,1-Trichloroethane	ND		ug/kg	0.56	0.19	1
Bromodichloromethane	ND		ug/kg	0.56	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.31	1
cis-1,3-Dichloropropene	ND		ug/kg	0.56	0.18	1
Bromoform	ND		ug/kg	4.5	0.28	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.56	0.19	1
Benzene	ND		ug/kg	0.56	0.19	1
Toluene	ND		ug/kg	1.1	0.61	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Chloromethane	ND		ug/kg	4.5	1.0	1
Bromomethane	ND		ug/kg	2.3	0.66	1
Vinyl chloride	ND		ug/kg	1.1	0.38	1
Chloroethane	ND		ug/kg	2.3	0.51	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.15	1
Trichloroethene	ND		ug/kg	0.56	0.15	1
1,2-Dichlorobenzene	ND		ug/kg	2.3	0.16	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-11 Date Collected: 09/07/18 08:45

Client ID: PILE 1 VOC-11 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.3	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	2.3	0.19	1
Methyl tert butyl ether	ND		ug/kg	2.3	0.23	1
p/m-Xylene	ND		ug/kg	2.3	0.63	1
o-Xylene	ND		ug/kg	1.1	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.20	1
Styrene	ND		ug/kg	1.1	0.22	1
Dichlorodifluoromethane	ND		ug/kg	11	1.0	1
Acetone	ND		ug/kg	11	5.4	1
Carbon disulfide	ND		ug/kg	11	5.1	1
2-Butanone	ND		ug/kg	11	2.5	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
2-Hexanone	ND		ug/kg	11	1.3	1
Bromochloromethane	ND		ug/kg	2.3	0.23	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.32	1
n-Butylbenzene	ND		ug/kg	1.1	0.19	1
sec-Butylbenzene	ND		ug/kg	1.1	0.16	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.4	1.1	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
n-Propylbenzene	ND		ug/kg	1.1	0.19	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.3	0.36	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.3	0.31	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.3	0.22	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.3	0.38	1
Methyl Acetate	ND		ug/kg	4.5	1.1	1
Cyclohexane	ND		ug/kg	11	0.62	1
1,4-Dioxane	ND		ug/kg	110	40.	1
Freon-113	ND		ug/kg	4.5	0.78	1
Methyl cyclohexane	ND		ug/kg	4.5	0.68	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	100		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-12
Client ID: PILE 1 VOC-12
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 16:17
Analyst: MKS
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	6.0	2.8	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.18	1
Chloroform	ND		ug/kg	1.8	0.17	1
Carbon tetrachloride	ND		ug/kg	1.2	0.28	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.15	1
Dibromochloromethane	ND		ug/kg	1.2	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.32	1
Tetrachloroethene	ND		ug/kg	0.60	0.24	1
Chlorobenzene	ND		ug/kg	0.60	0.15	1
Trichlorofluoromethane	ND		ug/kg	4.8	0.84	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.31	1
1,1,1-Trichloroethane	ND		ug/kg	0.60	0.20	1
Bromodichloromethane	ND		ug/kg	0.60	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.33	1
cis-1,3-Dichloropropene	ND		ug/kg	0.60	0.19	1
Bromoform	ND		ug/kg	4.8	0.30	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.60	0.20	1
Benzene	ND		ug/kg	0.60	0.20	1
Toluene	ND		ug/kg	1.2	0.66	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	4.8	1.1	1
Bromomethane	ND		ug/kg	2.4	0.70	1
Vinyl chloride	ND		ug/kg	1.2	0.40	1
Chloroethane	ND		ug/kg	2.4	0.55	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.29	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1
Trichloroethene	ND		ug/kg	0.60	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.4	0.17	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-12 Date Collected: 09/07/18 09:15

Client ID: PILE 1 VOC-12 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.4	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.4	0.21	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.24	1
p/m-Xylene	ND		ug/kg	2.4	0.68	1
o-Xylene	ND		ug/kg	1.2	0.35	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.21	1
Styrene	ND		ug/kg	1.2	0.24	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	5.8	1
Carbon disulfide	ND		ug/kg	12	5.5	1
2-Butanone	ND		ug/kg	12	2.7	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.5	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.4	0.25	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.34	1
n-Butylbenzene	ND		ug/kg	1.2	0.20	1
sec-Butylbenzene	ND		ug/kg	1.2	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.6	1.2	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.13	1
n-Propylbenzene	ND		ug/kg	1.2	0.21	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.4	0.39	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.4	0.33	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.4	0.23	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.4	0.40	1
Methyl Acetate	ND		ug/kg	4.8	1.1	1
Cyclohexane	ND		ug/kg	12	0.66	1
1,4-Dioxane	ND		ug/kg	120	42.	1
Freon-113	ND		ug/kg	4.8	0.84	1
Methyl cyclohexane	ND		ug/kg	4.8	0.73	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	106		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-13
Client ID: PILE 1 VOC-13
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 15:01
Analyst: MKS
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	5.9	2.7	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.17	1
Chloroform	ND		ug/kg	1.8	0.17	1
Carbon tetrachloride	ND		ug/kg	1.2	0.27	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.15	1
Dibromochloromethane	ND		ug/kg	1.2	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.32	1
Tetrachloroethene	ND		ug/kg	0.59	0.23	1
Chlorobenzene	ND		ug/kg	0.59	0.15	1
Trichlorofluoromethane	ND		ug/kg	4.8	0.82	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.30	1
1,1,1-Trichloroethane	ND		ug/kg	0.59	0.20	1
Bromodichloromethane	ND		ug/kg	0.59	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.32	1
cis-1,3-Dichloropropene	ND		ug/kg	0.59	0.19	1
Bromoform	ND		ug/kg	4.8	0.29	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.59	0.20	1
Benzene	ND		ug/kg	0.59	0.20	1
Toluene	ND		ug/kg	1.2	0.64	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	4.8	1.1	1
Bromomethane	ND		ug/kg	2.4	0.69	1
Vinyl chloride	ND		ug/kg	1.2	0.40	1
Chloroethane	ND		ug/kg	2.4	0.54	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1
Trichloroethene	ND		ug/kg	0.59	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.4	0.17	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-13 Date Collected: 09/07/18 09:45

Client ID: PILE 1 VOC-13 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.4	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.4	0.20	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.24	1
p/m-Xylene	ND		ug/kg	2.4	0.66	1
o-Xylene	ND		ug/kg	1.2	0.34	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.21	1
Styrene	ND		ug/kg	1.2	0.23	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	5.7	1
Carbon disulfide	ND		ug/kg	12	5.4	1
2-Butanone	ND		ug/kg	12	2.6	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.5	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.4	0.24	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.33	1
n-Butylbenzene	ND		ug/kg	1.2	0.20	1
sec-Butylbenzene	ND		ug/kg	1.2	0.17	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.6	1.2	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.13	1
n-Propylbenzene	ND		ug/kg	1.2	0.20	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.4	0.38	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.4	0.32	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.4	0.23	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.4	0.40	1
Methyl Acetate	ND		ug/kg	4.8	1.1	1
Cyclohexane	ND		ug/kg	12	0.65	1
1,4-Dioxane	ND		ug/kg	120	42.	1
Freon-113	ND		ug/kg	4.8	0.82	1
Methyl cyclohexane	ND		ug/kg	4.8	0.72	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	129		70-130
Dibromofluoromethane	94		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-14
Client ID: PILE 1 VOC-14
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 01:30
Analyst: JC
Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.2	J	ug/kg	4.3	2.0	1
1,1-Dichloroethane	ND		ug/kg	0.87	0.12	1
Chloroform	ND		ug/kg	1.3	0.12	1
Carbon tetrachloride	ND		ug/kg	0.87	0.20	1
1,2-Dichloropropane	ND		ug/kg	0.87	0.11	1
Dibromochloromethane	ND		ug/kg	0.87	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	0.87	0.23	1
Tetrachloroethene	ND		ug/kg	0.43	0.17	1
Chlorobenzene	ND		ug/kg	0.43	0.11	1
Trichlorofluoromethane	ND		ug/kg	3.5	0.60	1
1,2-Dichloroethane	ND		ug/kg	0.87	0.22	1
1,1,1-Trichloroethane	ND		ug/kg	0.43	0.14	1
Bromodichloromethane	ND		ug/kg	0.43	0.09	1
trans-1,3-Dichloropropene	ND		ug/kg	0.87	0.24	1
cis-1,3-Dichloropropene	ND		ug/kg	0.43	0.14	1
Bromoform	ND		ug/kg	3.5	0.21	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.43	0.14	1
Benzene	ND		ug/kg	0.43	0.14	1
Toluene	ND		ug/kg	0.87	0.47	1
Ethylbenzene	ND		ug/kg	0.87	0.12	1
Chloromethane	ND		ug/kg	3.5	0.81	1
Bromomethane	ND		ug/kg	1.7	0.50	1
Vinyl chloride	ND		ug/kg	0.87	0.29	1
Chloroethane	ND		ug/kg	1.7	0.39	1
1,1-Dichloroethene	ND		ug/kg	0.87	0.21	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.12	1
Trichloroethene	ND		ug/kg	0.43	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	1.7	0.12	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-14 Date Collected: 09/07/18 10:15

Client ID: PILE 1 VOC-14 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.7	0.13	1
1,4-Dichlorobenzene	ND		ug/kg	1.7	0.15	1
Methyl tert butyl ether	ND		ug/kg	1.7	0.17	1
p/m-Xylene	ND		ug/kg	1.7	0.48	1
o-Xylene	ND		ug/kg	0.87	0.25	1
cis-1,2-Dichloroethene	ND		ug/kg	0.87	0.15	1
Styrene	ND		ug/kg	0.87	0.17	1
Dichlorodifluoromethane	ND		ug/kg	8.7	0.79	1
Acetone	ND		ug/kg	8.7	4.2	1
Carbon disulfide	ND		ug/kg	8.7	3.9	1
2-Butanone	ND		ug/kg	8.7	1.9	1
4-Methyl-2-pentanone	ND		ug/kg	8.7	1.1	1
2-Hexanone	ND		ug/kg	8.7	1.0	1
Bromochloromethane	ND		ug/kg	1.7	0.18	1
1,2-Dibromoethane	ND		ug/kg	0.87	0.24	1
n-Butylbenzene	ND		ug/kg	0.87	0.14	1
sec-Butylbenzene	ND		ug/kg	0.87	0.13	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.6	0.86	1
Isopropylbenzene	ND		ug/kg	0.87	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.87	0.09	1
n-Propylbenzene	ND		ug/kg	0.87	0.15	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.7	0.28	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.7	0.24	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.7	0.17	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.7	0.29	1
Methyl Acetate	ND		ug/kg	3.5	0.82	1
Cyclohexane	ND		ug/kg	8.7	0.47	1
1,4-Dioxane	ND		ug/kg	87	30.	1
Freon-113	ND		ug/kg	3.5	0.60	1
Methyl cyclohexane	ND		ug/kg	3.5	0.52	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	96		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-15
Client ID: PILE 1 VOC-15
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 01:58
Analyst: JC
Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	3.9	J	ug/kg	4.9	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.98	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	0.98	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.98	0.12	1
Dibromochloromethane	ND		ug/kg	0.98	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.98	0.26	1
Tetrachloroethene	ND		ug/kg	0.49	0.19	1
Chlorobenzene	ND		ug/kg	0.49	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.68	1
1,2-Dichloroethane	ND		ug/kg	0.98	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.49	0.16	1
Bromodichloromethane	ND		ug/kg	0.49	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	0.98	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.49	0.15	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.49	0.16	1
Benzene	ND		ug/kg	0.49	0.16	1
Toluene	ND		ug/kg	0.98	0.53	1
Ethylbenzene	ND		ug/kg	0.98	0.14	1
Chloromethane	ND		ug/kg	3.9	0.91	1
Bromomethane	ND		ug/kg	2.0	0.57	1
Vinyl chloride	ND		ug/kg	0.98	0.33	1
Chloroethane	ND		ug/kg	2.0	0.44	1
1,1-Dichloroethene	ND		ug/kg	0.98	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.13	1
Trichloroethene	ND		ug/kg	0.49	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-15 Date Collected: 09/07/18 10:45

Client ID: PILE 1 VOC-15 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.55	1
o-Xylene	ND		ug/kg	0.98	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.98	0.17	1
Styrene	ND		ug/kg	0.98	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.8	0.89	1
Acetone	ND		ug/kg	9.8	4.7	1
Carbon disulfide	ND		ug/kg	9.8	4.4	1
2-Butanone	ND		ug/kg	9.8	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	9.8	1.2	1
2-Hexanone	ND		ug/kg	9.8	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.98	0.27	1
n-Butylbenzene	ND		ug/kg	0.98	0.16	1
sec-Butylbenzene	ND		ug/kg	0.98	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.97	1
Isopropylbenzene	ND		ug/kg	0.98	0.11	1
p-Isopropyltoluene	ND		ug/kg	0.98	0.11	1
n-Propylbenzene	ND		ug/kg	0.98	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33	1
Methyl Acetate	ND		ug/kg	3.9	0.93	1
Cyclohexane	ND		ug/kg	9.8	0.53	1
1,4-Dioxane	ND		ug/kg	98	34.	1
Freon-113	ND		ug/kg	3.9	0.68	1
Methyl cyclohexane	ND		ug/kg	3.9	0.59	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	123		70-130
Dibromofluoromethane	97		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-16
Client ID: PILE 1 VOC-16
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:05
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 02:25
Analyst: JC
Percent Solids: 70%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	7.1	3.2	1
1,1-Dichloroethane	ND		ug/kg	1.4	0.21	1
Chloroform	ND		ug/kg	2.1	0.20	1
Carbon tetrachloride	ND		ug/kg	1.4	0.33	1
1,2-Dichloropropane	ND		ug/kg	1.4	0.18	1
Dibromochloromethane	ND		ug/kg	1.4	0.20	1
1,1,2-Trichloroethane	ND		ug/kg	1.4	0.38	1
Tetrachloroethene	ND		ug/kg	0.71	0.28	1
Chlorobenzene	ND		ug/kg	0.71	0.18	1
Trichlorofluoromethane	ND		ug/kg	5.7	0.99	1
1,2-Dichloroethane	ND		ug/kg	1.4	0.36	1
1,1,1-Trichloroethane	ND		ug/kg	0.71	0.24	1
Bromodichloromethane	ND		ug/kg	0.71	0.16	1
trans-1,3-Dichloropropene	ND		ug/kg	1.4	0.39	1
cis-1,3-Dichloropropene	ND		ug/kg	0.71	0.22	1
Bromoform	ND		ug/kg	5.7	0.35	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.71	0.24	1
Benzene	ND		ug/kg	0.71	0.24	1
Toluene	ND		ug/kg	1.4	0.77	1
Ethylbenzene	ND		ug/kg	1.4	0.20	1
Chloromethane	ND		ug/kg	5.7	1.3	1
Bromomethane	ND		ug/kg	2.8	0.83	1
Vinyl chloride	ND		ug/kg	1.4	0.48	1
Chloroethane	ND		ug/kg	2.8	0.64	1
1,1-Dichloroethene	ND		ug/kg	1.4	0.34	1
trans-1,2-Dichloroethene	ND		ug/kg	2.1	0.19	1
Trichloroethene	ND		ug/kg	0.71	0.19	1
1,2-Dichlorobenzene	ND		ug/kg	2.8	0.20	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-16 Date Collected: 09/07/18 11:05

Client ID: PILE 1 VOC-16 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.8	0.21	1
1,4-Dichlorobenzene	ND		ug/kg	2.8	0.24	1
Methyl tert butyl ether	ND		ug/kg	2.8	0.28	1
p/m-Xylene	ND		ug/kg	2.8	0.80	1
o-Xylene	ND		ug/kg	1.4	0.41	1
cis-1,2-Dichloroethene	ND		ug/kg	1.4	0.25	1
Styrene	ND		ug/kg	1.4	0.28	1
Dichlorodifluoromethane	ND		ug/kg	14	1.3	1
Acetone	ND		ug/kg	14	6.8	1
Carbon disulfide	ND		ug/kg	14	6.5	1
2-Butanone	ND		ug/kg	14	3.2	1
4-Methyl-2-pentanone	ND		ug/kg	14	1.8	1
2-Hexanone	ND		ug/kg	14	1.7	1
Bromochloromethane	ND		ug/kg	2.8	0.29	1
1,2-Dibromoethane	ND		ug/kg	1.4	0.40	1
n-Butylbenzene	ND		ug/kg	1.4	0.24	1
sec-Butylbenzene	ND		ug/kg	1.4	0.21	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	4.3	1.4	1
Isopropylbenzene	ND		ug/kg	1.4	0.16	1
p-Isopropyltoluene	ND		ug/kg	1.4	0.16	1
n-Propylbenzene	ND		ug/kg	1.4	0.24	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.8	0.46	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.8	0.39	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.8	0.27	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.8	0.48	1
Methyl Acetate	ND		ug/kg	5.7	1.4	1
Cyclohexane	ND		ug/kg	14	0.77	1
1,4-Dioxane	ND		ug/kg	140	50.	1
Freon-113	ND		ug/kg	5.7	0.98	1
Methyl cyclohexane	ND		ug/kg	5.7	0.86	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	112		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	96		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-17
Client ID: PILE 1 VOC-17
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:10
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 14:34
Analyst: MKS
Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	6.0	2.8	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.17	1
Chloroform	ND		ug/kg	1.8	0.17	1
Carbon tetrachloride	ND		ug/kg	1.2	0.28	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.15	1
Dibromochloromethane	ND		ug/kg	1.2	0.17	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.32	1
Tetrachloroethene	ND		ug/kg	0.60	0.24	1
Chlorobenzene	ND		ug/kg	0.60	0.15	1
Trichlorofluoromethane	ND		ug/kg	4.8	0.83	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.31	1
1,1,1-Trichloroethane	ND		ug/kg	0.60	0.20	1
Bromodichloromethane	ND		ug/kg	0.60	0.13	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.33	1
cis-1,3-Dichloropropene	ND		ug/kg	0.60	0.19	1
Bromoform	ND		ug/kg	4.8	0.30	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.60	0.20	1
Benzene	ND		ug/kg	0.60	0.20	1
Toluene	ND		ug/kg	1.2	0.65	1
Ethylbenzene	ND		ug/kg	1.2	0.17	1
Chloromethane	ND		ug/kg	4.8	1.1	1
Bromomethane	ND		ug/kg	2.4	0.70	1
Vinyl chloride	ND		ug/kg	1.2	0.40	1
Chloroethane	ND		ug/kg	2.4	0.54	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.28	1
trans-1,2-Dichloroethene	ND		ug/kg	1.8	0.16	1
Trichloroethene	ND		ug/kg	0.60	0.16	1
1,2-Dichlorobenzene	ND		ug/kg	2.4	0.17	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-17 Date Collected: 09/07/18 11:10

Client ID: PILE 1 VOC-17 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.4	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.4	0.20	1
Methyl tert butyl ether	ND		ug/kg	2.4	0.24	1
p/m-Xylene	ND		ug/kg	2.4	0.67	1
o-Xylene	ND		ug/kg	1.2	0.35	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.21	1
Styrene	ND		ug/kg	1.2	0.24	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	5.8	1
Carbon disulfide	ND		ug/kg	12	5.5	1
2-Butanone	ND		ug/kg	12	2.7	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.5	1
2-Hexanone	ND		ug/kg	12	1.4	1
Bromochloromethane	ND		ug/kg	2.4	0.25	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.34	1
n-Butylbenzene	ND		ug/kg	1.2	0.20	1
sec-Butylbenzene	ND		ug/kg	1.2	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.6	1.2	1
Isopropylbenzene	ND		ug/kg	1.2	0.13	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.13	1
n-Propylbenzene	ND		ug/kg	1.2	0.20	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.4	0.39	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.4	0.33	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.4	0.23	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.4	0.40	1
Methyl Acetate	ND		ug/kg	4.8	1.1	1
Cyclohexane	ND		ug/kg	12	0.65	1
1,4-Dioxane	ND		ug/kg	120	42.	1
Freon-113	ND		ug/kg	4.8	0.83	1
Methyl cyclohexane	ND		ug/kg	4.8	0.72	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	126		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	106		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-25
Client ID: PILE 2 VOC-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 02:53
Analyst: JC
Percent Solids: 95%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.6	J	ug/kg	4.0	1.8	1
1,1-Dichloroethane	ND		ug/kg	0.79	0.11	1
Chloroform	ND		ug/kg	1.2	0.11	1
Carbon tetrachloride	ND		ug/kg	0.79	0.18	1
1,2-Dichloropropane	ND		ug/kg	0.79	0.10	1
Dibromochloromethane	ND		ug/kg	0.79	0.11	1
1,1,2-Trichloroethane	ND		ug/kg	0.79	0.21	1
Tetrachloroethene	ND		ug/kg	0.40	0.16	1
Chlorobenzene	ND		ug/kg	0.40	0.10	1
Trichlorofluoromethane	ND		ug/kg	3.2	0.55	1
1,2-Dichloroethane	ND		ug/kg	0.79	0.20	1
1,1,1-Trichloroethane	ND		ug/kg	0.40	0.13	1
Bromodichloromethane	ND		ug/kg	0.40	0.09	1
trans-1,3-Dichloropropene	ND		ug/kg	0.79	0.22	1
cis-1,3-Dichloropropene	ND		ug/kg	0.40	0.12	1
Bromoform	ND		ug/kg	3.2	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.40	0.13	1
Benzene	ND		ug/kg	0.40	0.13	1
Toluene	ND		ug/kg	0.79	0.43	1
Ethylbenzene	ND		ug/kg	0.79	0.11	1
Chloromethane	ND		ug/kg	3.2	0.74	1
Bromomethane	ND		ug/kg	1.6	0.46	1
Vinyl chloride	ND		ug/kg	0.79	0.26	1
Chloroethane	ND		ug/kg	1.6	0.36	1
1,1-Dichloroethene	ND		ug/kg	0.79	0.19	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	0.11	1
Trichloroethene	ND		ug/kg	0.40	0.11	1
1,2-Dichlorobenzene	ND		ug/kg	1.6	0.11	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-25 Date Collected: 09/07/18 11:15

Client ID: PILE 2 VOC-1 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.6	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	1.6	0.14	1
Methyl tert butyl ether	ND		ug/kg	1.6	0.16	1
p/m-Xylene	ND		ug/kg	1.6	0.44	1
o-Xylene	ND		ug/kg	0.79	0.23	1
cis-1,2-Dichloroethene	ND		ug/kg	0.79	0.14	1
Styrene	ND		ug/kg	0.79	0.16	1
Dichlorodifluoromethane	ND		ug/kg	7.9	0.72	1
Acetone	ND		ug/kg	7.9	3.8	1
Carbon disulfide	ND		ug/kg	7.9	3.6	1
2-Butanone	ND		ug/kg	7.9	1.8	1
4-Methyl-2-pentanone	ND		ug/kg	7.9	1.0	1
2-Hexanone	ND		ug/kg	7.9	0.93	1
Bromochloromethane	ND		ug/kg	1.6	0.16	1
1,2-Dibromoethane	ND		ug/kg	0.79	0.22	1
n-Butylbenzene	ND		ug/kg	0.79	0.13	1
sec-Butylbenzene	ND		ug/kg	0.79	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.4	0.79	1
Isopropylbenzene	ND		ug/kg	0.79	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.79	0.09	1
n-Propylbenzene	ND		ug/kg	0.79	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.6	0.25	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.6	0.22	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.6	0.15	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.6	0.26	1
Methyl Acetate	ND		ug/kg	3.2	0.75	1
Cyclohexane	ND		ug/kg	7.9	0.43	1
1,4-Dioxane	ND		ug/kg	79	28.	1
Freon-113	ND		ug/kg	3.2	0.55	1
Methyl cyclohexane	ND		ug/kg	3.2	0.48	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	119		70-130
4-Bromofluorobenzene	**131**	Q	70-130
Dibromofluoromethane	97		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-26
Client ID: PILE 2 VOC-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:20
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 15:00
Analyst: MKS
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.9	2.3	1
1,1-Dichloroethane	ND		ug/kg	0.99	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	0.99	0.23	1
1,2-Dichloropropane	ND		ug/kg	0.99	0.12	1
Dibromochloromethane	ND		ug/kg	0.99	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.99	0.26	1
Tetrachloroethene	ND		ug/kg	0.49	0.19	1
Chlorobenzene	ND		ug/kg	0.49	0.12	1
Trichlorofluoromethane	ND		ug/kg	4.0	0.69	1
1,2-Dichloroethane	ND		ug/kg	0.99	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.49	0.16	1
Bromodichloromethane	ND		ug/kg	0.49	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	0.99	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.49	0.16	1
Bromoform	ND		ug/kg	4.0	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.49	0.16	1
Benzene	ND		ug/kg	0.49	0.16	1
Toluene	ND		ug/kg	0.99	0.54	1
Ethylbenzene	ND		ug/kg	0.99	0.14	1
Chloromethane	ND		ug/kg	4.0	0.92	1
Bromomethane	ND		ug/kg	2.0	0.57	1
Vinyl chloride	ND		ug/kg	0.99	0.33	1
Chloroethane	ND		ug/kg	2.0	0.45	1
1,1-Dichloroethene	ND		ug/kg	0.99	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	ND		ug/kg	0.49	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-26 Date Collected: 09/07/18 11:20

Client ID: PILE 2 VOC-2 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.55	1
o-Xylene	ND		ug/kg	0.99	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	0.99	0.17	1
Styrene	ND		ug/kg	0.99	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.9	0.90	1
Acetone	ND		ug/kg	9.9	4.8	1
Carbon disulfide	ND		ug/kg	9.9	4.5	1
2-Butanone	ND		ug/kg	9.9	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	9.9	1.3	1
2-Hexanone	ND		ug/kg	9.9	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.99	0.28	1
n-Butylbenzene	ND		ug/kg	0.99	0.16	1
sec-Butylbenzene	ND		ug/kg	0.99	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	0.99	1
Isopropylbenzene	ND		ug/kg	0.99	0.11	1
p-Isopropyltoluene	ND		ug/kg	0.99	0.11	1
n-Propylbenzene	ND		ug/kg	0.99	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33	1
Methyl Acetate	ND		ug/kg	4.0	0.94	1
Cyclohexane	ND		ug/kg	9.9	0.54	1
1,4-Dioxane	ND		ug/kg	99	35.	1
Freon-113	ND		ug/kg	4.0	0.68	1
Methyl cyclohexane	ND		ug/kg	4.0	0.60	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	105		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-27
Client ID: PILE 2 VOC-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:25
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 03:21
Analyst: JC
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.7	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.94	0.14	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.94	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.94	0.12	1
Dibromochloromethane	ND		ug/kg	0.94	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.94	0.25	1
Tetrachloroethene	ND		ug/kg	0.47	0.18	1
Chlorobenzene	ND		ug/kg	0.47	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.8	0.66	1
1,2-Dichloroethane	ND		ug/kg	0.94	0.24	1
1,1,1-Trichloroethane	ND		ug/kg	0.47	0.16	1
Bromodichloromethane	ND		ug/kg	0.47	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.94	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.47	0.15	1
Bromoform	ND		ug/kg	3.8	0.23	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.47	0.16	1
Benzene	ND		ug/kg	0.47	0.16	1
Toluene	ND		ug/kg	0.94	0.51	1
Ethylbenzene	ND		ug/kg	0.94	0.13	1
Chloromethane	ND		ug/kg	3.8	0.88	1
Bromomethane	ND		ug/kg	1.9	0.55	1
Vinyl chloride	ND		ug/kg	0.94	0.32	1
Chloroethane	ND		ug/kg	1.9	0.43	1
1,1-Dichloroethene	ND		ug/kg	0.94	0.22	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1
Trichloroethene	ND		ug/kg	0.47	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-27 Date Collected: 09/07/18 11:25

Client ID: PILE 2 VOC-3 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.19	1
p/m-Xylene	ND		ug/kg	1.9	0.53	1
o-Xylene	ND		ug/kg	0.94	0.27	1
cis-1,2-Dichloroethene	ND		ug/kg	0.94	0.16	1
Styrene	ND		ug/kg	0.94	0.18	1
Dichlorodifluoromethane	ND		ug/kg	9.4	0.86	1
Acetone	30		ug/kg	9.4	4.5	1
Carbon disulfide	ND		ug/kg	9.4	4.3	1
2-Butanone	ND		ug/kg	9.4	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.4	1.2	1
2-Hexanone	ND		ug/kg	9.4	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.19	1
1,2-Dibromoethane	ND		ug/kg	0.94	0.26	1
n-Butylbenzene	ND		ug/kg	0.94	0.16	1
sec-Butylbenzene	ND		ug/kg	0.94	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.8	0.94	1
Isopropylbenzene	ND		ug/kg	0.94	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.94	0.10	1
n-Propylbenzene	ND		ug/kg	0.94	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.30	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
Methyl Acetate	ND		ug/kg	3.8	0.90	1
Cyclohexane	ND		ug/kg	9.4	0.51	1
1,4-Dioxane	ND		ug/kg	94	33.	1
Freon-113	ND		ug/kg	3.8	0.65	1
Methyl cyclohexane	ND		ug/kg	3.8	0.57	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	123		70-130
4-Bromofluorobenzene	**138**	Q	70-130
Dibromofluoromethane	99		70-130

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-27 R
Client ID: PILE 2 VOC-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:25
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 13:28
Analyst: MKS
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.5	J	ug/kg	4.2	1.9	1
1,1-Dichloroethane	ND		ug/kg	0.84	0.12	1
Chloroform	ND		ug/kg	1.3	0.12	1
Carbon tetrachloride	ND		ug/kg	0.84	0.19	1
1,2-Dichloropropane	ND		ug/kg	0.84	0.10	1
Dibromochloromethane	ND		ug/kg	0.84	0.12	1
1,1,2-Trichloroethane	ND		ug/kg	0.84	0.22	1
Tetrachloroethene	ND		ug/kg	0.42	0.16	1
Chlorobenzene	ND		ug/kg	0.42	0.11	1
Trichlorofluoromethane	ND		ug/kg	3.4	0.59	1
1,2-Dichloroethane	ND		ug/kg	0.84	0.22	1
1,1,1-Trichloroethane	ND		ug/kg	0.42	0.14	1
Bromodichloromethane	ND		ug/kg	0.42	0.09	1
trans-1,3-Dichloropropene	ND		ug/kg	0.84	0.23	1
cis-1,3-Dichloropropene	ND		ug/kg	0.42	0.13	1
Bromoform	ND		ug/kg	3.4	0.21	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.42	0.14	1
Benzene	ND		ug/kg	0.42	0.14	1
Toluene	ND		ug/kg	0.84	0.46	1
Ethylbenzene	ND		ug/kg	0.84	0.12	1
Chloromethane	ND		ug/kg	3.4	0.78	1
Bromomethane	ND		ug/kg	1.7	0.49	1
Vinyl chloride	ND		ug/kg	0.84	0.28	1
Chloroethane	ND		ug/kg	1.7	0.38	1
1,1-Dichloroethene	ND		ug/kg	0.84	0.20	1
trans-1,2-Dichloroethene	ND		ug/kg	1.3	0.12	1
Trichloroethene	ND		ug/kg	0.42	0.12	1
1,2-Dichlorobenzene	ND		ug/kg	1.7	0.12	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-27 R
Client ID: PILE 2 VOC-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:25
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.7	0.12	1
1,4-Dichlorobenzene	ND		ug/kg	1.7	0.14	1
Methyl tert butyl ether	ND		ug/kg	1.7	0.17	1
p/m-Xylene	ND		ug/kg	1.7	0.47	1
o-Xylene	ND		ug/kg	0.84	0.24	1
cis-1,2-Dichloroethene	ND		ug/kg	0.84	0.15	1
Styrene	ND		ug/kg	0.84	0.16	1
Dichlorodifluoromethane	ND		ug/kg	8.4	0.77	1
Acetone	ND		ug/kg	8.4	4.0	1
Carbon disulfide	ND		ug/kg	8.4	3.8	1
2-Butanone	ND		ug/kg	8.4	1.9	1
4-Methyl-2-pentanone	ND		ug/kg	8.4	1.1	1
2-Hexanone	ND		ug/kg	8.4	1.0	1
Bromochloromethane	ND		ug/kg	1.7	0.17	1
1,2-Dibromoethane	ND		ug/kg	0.84	0.24	1
n-Butylbenzene	ND		ug/kg	0.84	0.14	1
sec-Butylbenzene	ND		ug/kg	0.84	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.5	0.84	1
Isopropylbenzene	ND		ug/kg	0.84	0.09	1
p-Isopropyltoluene	ND		ug/kg	0.84	0.09	1
n-Propylbenzene	ND		ug/kg	0.84	0.14	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.7	0.27	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.7	0.23	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.7	0.16	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.7	0.28	1
Methyl Acetate	ND		ug/kg	3.4	0.80	1
Cyclohexane	ND		ug/kg	8.4	0.46	1
1,4-Dioxane	ND		ug/kg	84	30.	1
Freon-113	ND		ug/kg	3.4	0.58	1
Methyl cyclohexane	ND		ug/kg	3.4	0.51	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	121		70-130
4-Bromofluorobenzene	**134**	Q	70-130
Dibromofluoromethane	98		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-28
Client ID: PILE 2 VOC-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:35
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 15:26
Analyst: MKS
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	4.8	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.96	0.14	1
Chloroform	ND		ug/kg	1.4	0.13	1
Carbon tetrachloride	ND		ug/kg	0.96	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.96	0.12	1
Dibromochloromethane	ND		ug/kg	0.96	0.13	1
1,1,2-Trichloroethane	ND		ug/kg	0.96	0.26	1
Tetrachloroethene	ND		ug/kg	0.48	0.19	1
Chlorobenzene	ND		ug/kg	0.48	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.8	0.66	1
1,2-Dichloroethane	ND		ug/kg	0.96	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Bromodichloromethane	ND		ug/kg	0.48	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.96	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.48	0.15	1
Bromoform	ND		ug/kg	3.8	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.48	0.16	1
Benzene	ND		ug/kg	0.48	0.16	1
Toluene	ND		ug/kg	0.96	0.52	1
Ethylbenzene	ND		ug/kg	0.96	0.13	1
Chloromethane	ND		ug/kg	3.8	0.89	1
Bromomethane	ND		ug/kg	1.9	0.56	1
Vinyl chloride	ND		ug/kg	0.96	0.32	1
Chloroethane	ND		ug/kg	1.9	0.43	1
1,1-Dichloroethene	ND		ug/kg	0.96	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1
Trichloroethene	ND		ug/kg	0.48	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-28 Date Collected: 09/07/18 11:35

Client ID: PILE 2 VOC-4 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.19	1
p/m-Xylene	ND		ug/kg	1.9	0.54	1
o-Xylene	ND		ug/kg	0.96	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.96	0.17	1
Styrene	ND		ug/kg	0.96	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.6	0.88	1
Acetone	ND		ug/kg	9.6	4.6	1
Carbon disulfide	ND		ug/kg	9.6	4.4	1
2-Butanone	ND		ug/kg	9.6	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.6	1.2	1
2-Hexanone	ND		ug/kg	9.6	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.96	0.27	1
n-Butylbenzene	ND		ug/kg	0.96	0.16	1
sec-Butylbenzene	ND		ug/kg	0.96	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.96	1
Isopropylbenzene	ND		ug/kg	0.96	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.96	0.10	1
n-Propylbenzene	ND		ug/kg	0.96	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.18	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
Methyl Acetate	ND		ug/kg	3.8	0.91	1
Cyclohexane	ND		ug/kg	9.6	0.52	1
1,4-Dioxane	ND		ug/kg	96	34.	1
Freon-113	ND		ug/kg	3.8	0.66	1
Methyl cyclohexane	ND		ug/kg	3.8	0.58	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**132**	Q	70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	128		70-130
Dibromofluoromethane	106		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-29
Client ID: PILE 2 VOC-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 09/13/18 15:51
Analyst: MKS
Percent Solids: 98%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	2.9	J	ug/kg	5.0	2.3	1
1,1-Dichloroethane	ND		ug/kg	0.99	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	0.99	0.23	1
1,2-Dichloropropane	ND		ug/kg	0.99	0.12	1
Dibromochloromethane	ND		ug/kg	0.99	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.99	0.26	1
Tetrachloroethene	ND		ug/kg	0.50	0.19	1
Chlorobenzene	ND		ug/kg	0.50	0.12	1
Trichlorofluoromethane	ND		ug/kg	4.0	0.69	1
1,2-Dichloroethane	ND		ug/kg	0.99	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.16	1
Bromodichloromethane	ND		ug/kg	0.50	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	0.99	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16	1
Bromoform	ND		ug/kg	4.0	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.16	1
Benzene	ND		ug/kg	0.50	0.16	1
Toluene	ND		ug/kg	0.99	0.54	1
Ethylbenzene	ND		ug/kg	0.99	0.14	1
Chloromethane	ND		ug/kg	4.0	0.92	1
Bromomethane	ND		ug/kg	2.0	0.58	1
Vinyl chloride	ND		ug/kg	0.99	0.33	1
Chloroethane	ND		ug/kg	2.0	0.45	1
1,1-Dichloroethene	ND		ug/kg	0.99	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1
Trichloroethene	ND		ug/kg	0.50	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-29 Date Collected: 09/07/18 11:45

Client ID: PILE 2 VOC-5 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.56	1
o-Xylene	ND		ug/kg	0.99	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	0.99	0.17	1
Styrene	ND		ug/kg	0.99	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.9	0.91	1
Acetone	ND		ug/kg	9.9	4.8	1
Carbon disulfide	ND		ug/kg	9.9	4.5	1
2-Butanone	ND		ug/kg	9.9	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	9.9	1.3	1
2-Hexanone	ND		ug/kg	9.9	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.99	0.28	1
n-Butylbenzene	ND		ug/kg	0.99	0.16	1
sec-Butylbenzene	ND		ug/kg	0.99	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	0.99	1
Isopropylbenzene	ND		ug/kg	0.99	0.11	1
p-Isopropyltoluene	ND		ug/kg	0.99	0.11	1
n-Propylbenzene	ND		ug/kg	0.99	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33	1
Methyl Acetate	ND		ug/kg	4.0	0.94	1
Cyclohexane	ND		ug/kg	9.9	0.54	1
1,4-Dioxane	ND		ug/kg	99	35.	1
Freon-113	ND		ug/kg	4.0	0.69	1
Methyl cyclohexane	ND		ug/kg	4.0	0.60	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	**132**	Q	70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	117		70-130
Dibromofluoromethane	105		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/12/18 20:41
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 10 Batch: WG1156486-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	0.69	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/12/18 20:41
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 10 Batch: WG1156486-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	0.22	J	ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	100	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/12/18 20:41
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 10 Batch: WG1156486-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	89		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 07:38
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 07-08,11-12,17,26,28-29 Batch: WG1156516-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	1.0	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 07:38
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 07-08,11-12,17,26,28-29 Batch: WG1156516-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	100	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 07:38
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 07-08,11-12,17,26,28-29 Batch: WG1156516-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	129		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	101		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 09:19
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 27 Batch: WG1156524-10					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 09:19
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 27 Batch: WG1156524-10					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	100	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 09:19
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 27 Batch: WG1156524-10					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	95		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/12/18 20:25
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03,05-06,14-16,25,27 Batch: WG1156524-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/12/18 20:25
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03,05-06,14-16,25,27 Batch: WG1156524-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	100	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/12/18 20:25
Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03,05-06,14-16,25,27 Batch: WG1156524-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	95		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 09:06
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13 Batch: WG1156710-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	1.0	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 09:06
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13 Batch: WG1156710-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	0.22	J	ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	100	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 09:06
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 13 Batch: WG1156710-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	87		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 14:14
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 09 Batch: WG1156920-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 14:14
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 09 Batch: WG1156920-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	100	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/13/18 14:14
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 09 Batch: WG1156920-5					
Tentatively Identified Compounds					
Total TIC Compounds	2.58	J	ug/kg		
Unknown	2.58	J	ug/kg		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	96		70-130

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/14/18 07:57
Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG1157020-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/14/18 07:57
Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG1157020-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	100	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 09/14/18 07:57
Analyst: JC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 04 Batch: WG1157020-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	94		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 10 Batch: WG1156486-3 WG1156486-4								
Methylene chloride	100		99		70-130	1		30
1,1-Dichloroethane	111		110		70-130	1		30
Chloroform	99		97		70-130	2		30
Carbon tetrachloride	90		88		70-130	2		30
1,2-Dichloropropane	113		112		70-130	1		30
Dibromochloromethane	91		89		70-130	2		30
1,1,2-Trichloroethane	105		103		70-130	2		30
Tetrachloroethene	86		85		70-130	1		30
Chlorobenzene	92		93		70-130	1		30
Trichlorofluoromethane	85		84		70-139	1		30
1,2-Dichloroethane	100		98		70-130	2		30
1,1,1-Trichloroethane	93		93		70-130	0		30
Bromodichloromethane	95		94		70-130	1		30
trans-1,3-Dichloropropene	103		102		70-130	1		30
cis-1,3-Dichloropropene	102		100		70-130	2		30
Bromoform	89		87		70-130	2		30
1,1,2,2-Tetrachloroethane	110		107		70-130	3		30
Benzene	101		100		70-130	1		30
Toluene	97		96		70-130	1		30
Ethylbenzene	98		98		70-130	0		30
Chloromethane	116		115		52-130	1		30
Bromomethane	103		100		57-147	3		30
Vinyl chloride	99		98		67-130	1		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 10 Batch: WG1156486-3 WG1156486-4								
Chloroethane	89		89		50-151	0		30
1,1-Dichloroethene	95		94		65-135	1		30
trans-1,2-Dichloroethene	97		95		70-130	2		30
Trichloroethene	94		93		70-130	1		30
1,2-Dichlorobenzene	92		91		70-130	1		30
1,3-Dichlorobenzene	93		92		70-130	1		30
1,4-Dichlorobenzene	92		92		70-130	0		30
Methyl tert butyl ether	99		97		66-130	2		30
p/m-Xylene	94		94		70-130	0		30
o-Xylene	94		93		70-130	1		30
cis-1,2-Dichloroethene	95		95		70-130	0		30
Styrene	95		94		70-130	1		30
Dichlorodifluoromethane	73		71		30-146	3		30
Acetone	116		109		54-140	6		30
Carbon disulfide	97		96		59-130	1		30
2-Butanone	122		114		70-130	7		30
4-Methyl-2-pentanone	118		113		70-130	4		30
2-Hexanone	118		112		70-130	5		30
Bromochloromethane	89		88		70-130	1		30
1,2-Dibromoethane	94		92		70-130	2		30
n-Butylbenzene	107		106		70-130	1		30
sec-Butylbenzene	102		102		70-130	0		30
1,2-Dibromo-3-chloropropane	85		82		68-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 10 Batch: WG1156486-3 WG1156486-4								
Isopropylbenzene	101		101		70-130	0		30
p-Isopropyltoluene	98		98		70-130	0		30
n-Propylbenzene	107		106		70-130	1		30
1,2,3-Trichlorobenzene	90		89		70-130	1		30
1,2,4-Trichlorobenzene	89		88		70-130	1		30
1,3,5-Trimethylbenzene	100		100		70-130	0		30
1,2,4-Trimethylbenzene	99		98		70-130	1		30
Methyl Acetate	124		119		51-146	4		30
Cyclohexane	117		116		59-142	1		30
1,4-Dioxane	93		89		65-136	4		30
Freon-113	93		92		50-139	1		30
Methyl cyclohexane	100		98		70-130	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		103		70-130
Toluene-d8	105		106		70-130
4-Bromofluorobenzene	112		112		70-130
Dibromofluoromethane	92		92		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 07-08,11-12,17,26,28-29 Batch: WG1156516-3 WG1156516-4								
Methylene chloride	89		86		70-130	3		30
1,1-Dichloroethane	104		102		70-130	2		30
Chloroform	99		95		70-130	4		30
Carbon tetrachloride	92		89		70-130	3		30
1,2-Dichloropropane	101		104		70-130	3		30
Dibromochloromethane	88		87		70-130	1		30
1,1,2-Trichloroethane	99		95		70-130	4		30
Tetrachloroethene	82		79		70-130	4		30
Chlorobenzene	84		83		70-130	1		30
Trichlorofluoromethane	77		75		70-139	3		30
1,2-Dichloroethane	108		105		70-130	3		30
1,1,1-Trichloroethane	96		95		70-130	1		30
Bromodichloromethane	101		101		70-130	0		30
trans-1,3-Dichloropropene	105		102		70-130	3		30
cis-1,3-Dichloropropene	102		100		70-130	2		30
Bromoform	96		94		70-130	2		30
1,1,2,2-Tetrachloroethane	110		108		70-130	2		30
Benzene	92		90		70-130	2		30
Toluene	92		90		70-130	2		30
Ethylbenzene	94		94		70-130	0		30
Chloromethane	71		70		52-130	1		30
Bromomethane	70		70		57-147	0		30
Vinyl chloride	82		82		67-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 07-08,11-12,17,26,28-29 Batch: WG1156516-3 WG1156516-4								
Chloroethane	90		86		50-151	5		30
1,1-Dichloroethene	85		82		65-135	4		30
trans-1,2-Dichloroethene	87		84		70-130	4		30
Trichloroethene	91		85		70-130	7		30
1,2-Dichlorobenzene	89		86		70-130	3		30
1,3-Dichlorobenzene	88		86		70-130	2		30
1,4-Dichlorobenzene	86		83		70-130	4		30
Methyl tert butyl ether	85		85		66-130	0		30
p/m-Xylene	92		89		70-130	3		30
o-Xylene	88		86		70-130	2		30
cis-1,2-Dichloroethene	86		85		70-130	1		30
Styrene	92		90		70-130	2		30
Dichlorodifluoromethane	41		40		30-146	2		30
Acetone	103		115		54-140	11		30
Carbon disulfide	87		85		59-130	2		30
2-Butanone	**63**	Q	70		70-130	11		30
4-Methyl-2-pentanone	98		90		70-130	9		30
2-Hexanone	82		84		70-130	2		30
Bromochloromethane	77		74		70-130	4		30
1,2-Dibromoethane	88		83		70-130	6		30
n-Butylbenzene	113		111		70-130	2		30
sec-Butylbenzene	99		98		70-130	1		30
1,2-Dibromo-3-chloropropane	84		87		68-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 07-08,11-12,17,26,28-29 Batch: WG1156516-3 WG1156516-4								
Isopropylbenzene	92		91		70-130	1		30
p-Isopropyltoluene	90		87		70-130	3		30
n-Propylbenzene	102		99		70-130	3		30
1,2,3-Trichlorobenzene	92		90		70-130	2		30
1,2,4-Trichlorobenzene	90		88		70-130	2		30
1,3,5-Trimethylbenzene	97		95		70-130	2		30
1,2,4-Trimethylbenzene	97		96		70-130	1		30
Methyl Acetate	93		90		51-146	3		30
Cyclohexane	90		90		59-142	0		30
1,4-Dioxane	87		80		65-136	8		30
Freon-113	86		85		50-139	1		30
Methyl cyclohexane	85		81		70-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	120		121		70-130
Toluene-d8	104		105		70-130
4-Bromofluorobenzene	109		109		70-130
Dibromofluoromethane	98		99		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-06,14-16,25,27 Batch: WG1156524-3 WG1156524-4								
Methylene chloride	88		87		70-130	1		30
1,1-Dichloroethane	88		85		70-130	3		30
Chloroform	88		86		70-130	2		30
Carbon tetrachloride	79		78		70-130	1		30
1,2-Dichloropropane	86		86		70-130	0		30
Dibromochloromethane	80		82		70-130	2		30
1,1,2-Trichloroethane	96		95		70-130	1		30
Tetrachloroethene	89		87		70-130	2		30
Chlorobenzene	88		87		70-130	1		30
Trichlorofluoromethane	118		115		70-139	3		30
1,2-Dichloroethane	83		82		70-130	1		30
1,1,1-Trichloroethane	83		81		70-130	2		30
Bromodichloromethane	80		79		70-130	1		30
trans-1,3-Dichloropropene	90		90		70-130	0		30
cis-1,3-Dichloropropene	81		81		70-130	0		30
Bromoform	80		81		70-130	1		30
1,1,2,2-Tetrachloroethane	99		97		70-130	2		30
Benzene	97		94		70-130	3		30
Toluene	99		98		70-130	1		30
Ethylbenzene	100		98		70-130	2		30
Chloromethane	79		77		52-130	3		30
Bromomethane	117		116		57-147	1		30
Vinyl chloride	104		100		67-130	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-06,14-16,25,27 Batch: WG1156524-3 WG1156524-4								
Chloroethane	113		110		50-151	3		30
1,1-Dichloroethene	86		84		65-135	2		30
trans-1,2-Dichloroethene	88		85		70-130	3		30
Trichloroethene	85		83		70-130	2		30
1,2-Dichlorobenzene	95		94		70-130	1		30
1,3-Dichlorobenzene	98		97		70-130	1		30
1,4-Dichlorobenzene	97		96		70-130	1		30
Methyl tert butyl ether	81		81		66-130	0		30
p/m-Xylene	94		93		70-130	1		30
o-Xylene	88		88		70-130	0		30
cis-1,2-Dichloroethene	87		85		70-130	2		30
Styrene	88		86		70-130	2		30
Dichlorodifluoromethane	82		77		30-146	6		30
Acetone	113		105		54-140	7		30
Carbon disulfide	85		82		59-130	4		30
2-Butanone	71		**69**	Q	70-130	3		30
4-Methyl-2-pentanone	93		92		70-130	1		30
2-Hexanone	83		83		70-130	0		30
Bromochloromethane	82		81		70-130	1		30
1,2-Dibromoethane	92		93		70-130	1		30
n-Butylbenzene	111		109		70-130	2		30
sec-Butylbenzene	106		103		70-130	3		30
1,2-Dibromo-3-chloropropane	87		89		68-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03,05-06,14-16,25,27 Batch: WG1156524-3 WG1156524-4								
Isopropylbenzene	105		102		70-130	3		30
p-Isopropyltoluene	105		102		70-130	3		30
n-Propylbenzene	109		106		70-130	3		30
1,2,3-Trichlorobenzene	91		92		70-130	1		30
1,2,4-Trichlorobenzene	95		95		70-130	0		30
1,3,5-Trimethylbenzene	103		100		70-130	3		30
1,2,4-Trimethylbenzene	103		100		70-130	3		30
Methyl Acetate	82		79		51-146	4		30
Cyclohexane	85		82		59-142	4		30
1,4-Dioxane	96		104		65-136	8		30
Freon-113	86		82		50-139	5		30
Methyl cyclohexane	92		89		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	100		99		70-130
Toluene-d8	106		107		70-130
4-Bromofluorobenzene	106		105		70-130
Dibromofluoromethane	95		95		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 27 Batch: WG1156524-8 WG1156524-9								
Methylene chloride	87		87		70-130	0		30
1,1-Dichloroethane	86		84		70-130	2		30
Chloroform	87		88		70-130	1		30
Carbon tetrachloride	78		77		70-130	1		30
1,2-Dichloropropane	87		86		70-130	1		30
Dibromochloromethane	85		84		70-130	1		30
1,1,2-Trichloroethane	99		96		70-130	3		30
Tetrachloroethene	85		82		70-130	4		30
Chlorobenzene	88		86		70-130	2		30
Trichlorofluoromethane	111		109		70-139	2		30
1,2-Dichloroethane	85		84		70-130	1		30
1,1,1-Trichloroethane	80		78		70-130	3		30
Bromodichloromethane	82		81		70-130	1		30
trans-1,3-Dichloropropene	91		89		70-130	2		30
cis-1,3-Dichloropropene	82		82		70-130	0		30
Bromoform	82		82		70-130	0		30
1,1,2,2-Tetrachloroethane	100		99		70-130	1		30
Benzene	93		92		70-130	1		30
Toluene	95		93		70-130	2		30
Ethylbenzene	97		93		70-130	4		30
Chloromethane	76		87		52-130	13		30
Bromomethane	108		115		57-147	6		30
Vinyl chloride	94		91		67-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 27 Batch: WG1156524-8 WG1156524-9								
Chloroethane	102		102		50-151	0		30
1,1-Dichloroethene	83		80		65-135	4		30
trans-1,2-Dichloroethene	85		83		70-130	2		30
Trichloroethene	82		79		70-130	4		30
1,2-Dichlorobenzene	95		94		70-130	1		30
1,3-Dichlorobenzene	96		94		70-130	2		30
1,4-Dichlorobenzene	95		94		70-130	1		30
Methyl tert butyl ether	84		85		66-130	1		30
p/m-Xylene	90		88		70-130	2		30
o-Xylene	87		84		70-130	4		30
cis-1,2-Dichloroethene	87		86		70-130	1		30
Styrene	87		84		70-130	4		30
Dichlorodifluoromethane	82		78		30-146	5		30
Acetone	113		109		54-140	4		30
Carbon disulfide	80		78		59-130	3		30
2-Butanone	78		78		70-130	0		30
4-Methyl-2-pentanone	96		94		70-130	2		30
2-Hexanone	87		85		70-130	2		30
Bromochloromethane	83		84		70-130	1		30
1,2-Dibromoethane	97		95		70-130	2		30
n-Butylbenzene	104		100		70-130	4		30
sec-Butylbenzene	101		97		70-130	4		30
1,2-Dibromo-3-chloropropane	92		92		68-130	0		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 27 Batch: WG1156524-8 WG1156524-9								
Isopropylbenzene	99		96		70-130	3		30
p-Isopropyltoluene	99		96		70-130	3		30
n-Propylbenzene	102		99		70-130	3		30
1,2,3-Trichlorobenzene	96		93		70-130	3		30
1,2,4-Trichlorobenzene	96		94		70-130	2		30
1,3,5-Trimethylbenzene	98		95		70-130	3		30
1,2,4-Trimethylbenzene	99		96		70-130	3		30
Methyl Acetate	83		84		51-146	1		30
Cyclohexane	82		80		59-142	2		30
1,4-Dioxane	96		95		65-136	1		30
Freon-113	84		81		50-139	4		30
Methyl cyclohexane	88		85		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	97		98		70-130
Toluene-d8	106		105		70-130
4-Bromofluorobenzene	106		105		70-130
Dibromofluoromethane	96		95		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13 Batch: WG1156710-3 WG1156710-4								
Methylene chloride	104		102		70-130	2		30
1,1-Dichloroethane	115		111		70-130	4		30
Chloroform	101		100		70-130	1		30
Carbon tetrachloride	92		89		70-130	3		30
1,2-Dichloropropane	118		116		70-130	2		30
Dibromochloromethane	94		91		70-130	3		30
1,1,2-Trichloroethane	109		105		70-130	4		30
Tetrachloroethene	88		85		70-130	3		30
Chlorobenzene	95		93		70-130	2		30
Trichlorofluoromethane	91		87		70-139	4		30
1,2-Dichloroethane	103		102		70-130	1		30
1,1,1-Trichloroethane	95		94		70-130	1		30
Bromodichloromethane	99		96		70-130	3		30
trans-1,3-Dichloropropene	106		106		70-130	0		30
cis-1,3-Dichloropropene	106		105		70-130	1		30
Bromoform	92		89		70-130	3		30
1,1,2,2-Tetrachloroethane	111		110		70-130	1		30
Benzene	105		102		70-130	3		30
Toluene	99		97		70-130	2		30
Ethylbenzene	101		98		70-130	3		30
Chloromethane	118		114		52-130	3		30
Bromomethane	111		107		57-147	4		30
Vinyl chloride	104		101		67-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13 Batch: WG1156710-3 WG1156710-4								
Chloroethane	97		93		50-151	4		30
1,1-Dichloroethene	100		96		65-135	4		30
trans-1,2-Dichloroethene	99		96		70-130	3		30
Trichloroethene	97		94		70-130	3		30
1,2-Dichlorobenzene	93		91		70-130	2		30
1,3-Dichlorobenzene	94		91		70-130	3		30
1,4-Dichlorobenzene	94		91		70-130	3		30
Methyl tert butyl ether	102		101		66-130	1		30
p/m-Xylene	96		94		70-130	2		30
o-Xylene	96		93		70-130	3		30
cis-1,2-Dichloroethene	99		97		70-130	2		30
Styrene	98		95		70-130	3		30
Dichlorodifluoromethane	77		73		30-146	5		30
Acetone	128		128		54-140	0		30
Carbon disulfide	101		98		59-130	3		30
2-Butanone	123		125		70-130	2		30
4-Methyl-2-pentanone	122		123		70-130	1		30
2-Hexanone	120		120		70-130	0		30
Bromochloromethane	92		90		70-130	2		30
1,2-Dibromoethane	98		96		70-130	2		30
n-Butylbenzene	105		102		70-130	3		30
sec-Butylbenzene	103		100		70-130	3		30
1,2-Dibromo-3-chloropropane	86		85		68-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 13 Batch: WG1156710-3 WG1156710-4								
Isopropylbenzene	103		99		70-130	4		30
p-Isopropyltoluene	99		94		70-130	5		30
n-Propylbenzene	108		104		70-130	4		30
1,2,3-Trichlorobenzene	90		88		70-130	2		30
1,2,4-Trichlorobenzene	88		86		70-130	2		30
1,3,5-Trimethylbenzene	101		98		70-130	3		30
1,2,4-Trimethylbenzene	100		97		70-130	3		30
Methyl Acetate	127		129		51-146	2		30
Cyclohexane	122		119		59-142	2		30
1,4-Dioxane	93		94		65-136	1		30
Freon-113	99		95		50-139	4		30
Methyl cyclohexane	102		99		70-130	3		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		101		70-130
Toluene-d8	105		105		70-130
4-Bromofluorobenzene	112		110		70-130
Dibromofluoromethane	93		93		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09 Batch: WG1156920-3 WG1156920-4								
Methylene chloride	83		84		70-130	1		30
1,1-Dichloroethane	96		96		70-130	0		30
Chloroform	97		97		70-130	0		30
Carbon tetrachloride	101		103		70-130	2		30
1,2-Dichloropropane	97		99		70-130	2		30
Dibromochloromethane	108		111		70-130	3		30
1,1,2-Trichloroethane	110		112		70-130	2		30
Tetrachloroethene	115		116		70-130	1		30
Chlorobenzene	110		110		70-130	0		30
Trichlorofluoromethane	90		89		70-139	1		30
1,2-Dichloroethane	88		88		70-130	0		30
1,1,1-Trichloroethane	99		100		70-130	1		30
Bromodichloromethane	98		100		70-130	2		30
trans-1,3-Dichloropropene	98		98		70-130	0		30
cis-1,3-Dichloropropene	100		100		70-130	0		30
Bromoform	95		98		70-130	3		30
1,1,2,2-Tetrachloroethane	110		112		70-130	2		30
Benzene	96		97		70-130	1		30
Toluene	109		109		70-130	0		30
Ethylbenzene	112		113		70-130	1		30
Chloromethane	82		79		52-130	4		30
Bromomethane	90		95		57-147	5		30
Vinyl chloride	82		81		67-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09 Batch: WG1156920-3 WG1156920-4								
Chloroethane	82		80		50-151	2		30
1,1-Dichloroethene	90		90		65-135	0		30
trans-1,2-Dichloroethene	99		100		70-130	1		30
Trichloroethene	100		100		70-130	0		30
1,2-Dichlorobenzene	117		119		70-130	2		30
1,3-Dichlorobenzene	118		119		70-130	1		30
1,4-Dichlorobenzene	113		115		70-130	2		30
Methyl tert butyl ether	91		92		66-130	1		30
p/m-Xylene	115		115		70-130	0		30
o-Xylene	113		115		70-130	2		30
cis-1,2-Dichloroethene	98		99		70-130	1		30
Styrene	114		114		70-130	0		30
Dichlorodifluoromethane	62		63		30-146	2		30
Acetone	77		73		54-140	5		30
Carbon disulfide	83		81		59-130	2		30
2-Butanone	90		90		70-130	0		30
4-Methyl-2-pentanone	97		98		70-130	1		30
2-Hexanone	104		102		70-130	2		30
Bromochloromethane	99		99		70-130	0		30
1,2-Dibromoethane	98		100		70-130	2		30
n-Butylbenzene	120		125		70-130	4		30
sec-Butylbenzene	118		121		70-130	3		30
1,2-Dibromo-3-chloropropane	96		100		68-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 09 Batch: WG1156920-3 WG1156920-4								
Isopropylbenzene	118		120		70-130	2		30
p-Isopropyltoluene	120		123		70-130	2		30
n-Propylbenzene	118		120		70-130	2		30
1,2,3-Trichlorobenzene	118		118		70-130	0		30
1,2,4-Trichlorobenzene	122		124		70-130	2		30
1,3,5-Trimethylbenzene	116		118		70-130	2		30
1,2,4-Trimethylbenzene	117		120		70-130	3		30
Methyl Acetate	74		74		51-146	0		30
Cyclohexane	98		99		59-142	1		30
1,4-Dioxane	93		93		65-136	0		30
Freon-113	88		88		50-139	0		30
Methyl cyclohexane	100		101		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		93		70-130
Toluene-d8	107		107		70-130
4-Bromofluorobenzene	103		104		70-130
Dibromofluoromethane	98		98		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG1157020-3 WG1157020-4								
Methylene chloride	80		80		70-130	0		30
1,1-Dichloroethane	90		89		70-130	1		30
Chloroform	91		91		70-130	0		30
Carbon tetrachloride	91		89		70-130	2		30
1,2-Dichloropropane	92		93		70-130	1		30
Dibromochloromethane	89		93		70-130	4		30
1,1,2-Trichloroethane	91		95		70-130	4		30
Tetrachloroethene	89		88		70-130	1		30
Chlorobenzene	87		87		70-130	0		30
Trichlorofluoromethane	87		86		70-139	1		30
1,2-Dichloroethane	89		92		70-130	3		30
1,1,1-Trichloroethane	92		90		70-130	2		30
Bromodichloromethane	93		96		70-130	3		30
trans-1,3-Dichloropropene	84		86		70-130	2		30
cis-1,3-Dichloropropene	94		96		70-130	2		30
Bromoform	87		92		70-130	6		30
1,1,2,2-Tetrachloroethane	88		95		70-130	8		30
Benzene	89		89		70-130	0		30
Toluene	88		89		70-130	1		30
Ethylbenzene	87		86		70-130	1		30
Chloromethane	79		77		52-130	3		30
Bromomethane	77		77		57-147	0		30
Vinyl chloride	82		80		67-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG1157020-3 WG1157020-4								
Chloroethane	88		86		50-151	2		30
1,1-Dichloroethene	87		85		65-135	2		30
trans-1,2-Dichloroethene	88		87		70-130	1		30
Trichloroethene	91		91		70-130	0		30
1,2-Dichlorobenzene	86		87		70-130	1		30
1,3-Dichlorobenzene	88		88		70-130	0		30
1,4-Dichlorobenzene	88		87		70-130	1		30
Methyl tert butyl ether	85		90		66-130	6		30
p/m-Xylene	88		87		70-130	1		30
o-Xylene	87		88		70-130	1		30
cis-1,2-Dichloroethene	90		90		70-130	0		30
Styrene	86		88		70-130	2		30
Dichlorodifluoromethane	68		64		30-146	6		30
Acetone	77		87		54-140	12		30
Carbon disulfide	86		85		59-130	1		30
2-Butanone	90		101		70-130	12		30
4-Methyl-2-pentanone	75		84		70-130	11		30
2-Hexanone	84		97		70-130	14		30
Bromochloromethane	93		96		70-130	3		30
1,2-Dibromoethane	88		94		70-130	7		30
n-Butylbenzene	90		88		70-130	2		30
sec-Butylbenzene	89		87		70-130	2		30
1,2-Dibromo-3-chloropropane	74		81		68-130	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 04 Batch: WG1157020-3 WG1157020-4								
Isopropylbenzene	88		86		70-130	2		30
p-Isopropyltoluene	87		85		70-130	2		30
n-Propylbenzene	90		88		70-130	2		30
1,2,3-Trichlorobenzene	79		83		70-130	5		30
1,2,4-Trichlorobenzene	82		84		70-130	2		30
1,3,5-Trimethylbenzene	88		86		70-130	2		30
1,2,4-Trimethylbenzene	87		86		70-130	1		30
Methyl Acetate	78		87		51-146	11		30
Cyclohexane	92		90		59-142	2		30
1,4-Dioxane	81		93		65-136	14		30
Freon-113	85		81		50-139	5		30
Methyl cyclohexane	92		91		70-130	1		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		99		70-130
Toluene-d8	98		97		70-130
4-Bromofluorobenzene	99		98		70-130
Dibromofluoromethane	98		99		70-130

SEMIVOLATILES

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-18
Client ID: PILE 1 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 12:40
Analyst: RC
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	160		ug/kg	150	20.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Fluoranthene	1900		ug/kg	120	22.	1
Naphthalene	63	J	ug/kg	190	24.	1
Benzo(a)anthracene	880		ug/kg	120	22.	1
Benzo(a)pyrene	760		ug/kg	150	47.	1
Benzo(b)fluoranthene	1000		ug/kg	120	32.	1
Benzo(k)fluoranthene	370		ug/kg	120	31.	1
Chrysene	840		ug/kg	120	20.	1
Acenaphthylene	51	J	ug/kg	150	30.	1
Anthracene	440		ug/kg	120	38.	1
Benzo(ghi)perylene	460		ug/kg	150	23.	1
Fluorene	170	J	ug/kg	190	19.	1
Phenanthrene	1600		ug/kg	120	24.	1
Dibenzo(a,h)anthracene	110	J	ug/kg	120	22.	1
Indeno(1,2,3-cd)pyrene	500		ug/kg	150	27.	1
Pyrene	1500		ug/kg	120	19.	1
Dibenzofuran	110	J	ug/kg	190	18.	1
Pentachlorophenol	ND		ug/kg	150	42.	1
Phenol	ND		ug/kg	190	29.	1
2-Methylphenol	ND		ug/kg	190	30.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	30.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-18 Date Collected: 09/07/18 07:00

Client ID: PILE 1 COMP-1 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	65		25-120
Phenol-d6	69		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	76		30-120
2,4,6-Tribromophenol	76		10-136
4-Terphenyl-d14	74		18-120

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-19
Client ID: PILE 1 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 13:06
Analyst: RC
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	110	J	ug/kg	160	20.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Fluoranthene	2200		ug/kg	120	22.	1
Naphthalene	50	J	ug/kg	190	24.	1
Benzo(a)anthracene	1000		ug/kg	120	22.	1
Benzo(a)pyrene	920		ug/kg	160	47.	1
Benzo(b)fluoranthene	1300		ug/kg	120	33.	1
Benzo(k)fluoranthene	430		ug/kg	120	31.	1
Chrysene	1100		ug/kg	120	20.	1
Acenaphthylene	42	J	ug/kg	160	30.	1
Anthracene	350		ug/kg	120	38.	1
Benzo(ghi)perylene	580		ug/kg	160	23.	1
Fluorene	110	J	ug/kg	190	19.	1
Phenanthrene	1400		ug/kg	120	24.	1
Dibenzo(a,h)anthracene	140		ug/kg	120	22.	1
Indeno(1,2,3-cd)pyrene	610		ug/kg	160	27.	1
Pyrene	1800		ug/kg	120	19.	1
Dibenzofuran	61	J	ug/kg	190	18.	1
Pentachlorophenol	ND		ug/kg	160	43.	1
Phenol	ND		ug/kg	190	29.	1
2-Methylphenol	ND		ug/kg	190	30.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	30.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-19 Date Collected: 09/07/18 07:30

Client ID: PILE 1 COMP-2 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	71		25-120
Phenol-d6	72		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	76		30-120
2,4,6-Tribromophenol	78		10-136
4-Terphenyl-d14	69		18-120

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-20
Client ID: PILE 1 COMP-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 13:32
Analyst: RC
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	440		ug/kg	160	21.	1
Hexachlorobenzene	ND		ug/kg	120	23.	1
Fluoranthene	4300		ug/kg	120	23.	1
Naphthalene	210		ug/kg	200	25.	1
Benzo(a)anthracene	1900		ug/kg	120	23.	1
Benzo(a)pyrene	1600		ug/kg	160	49.	1
Benzo(b)fluoranthene	2200		ug/kg	120	34.	1
Benzo(k)fluoranthene	660		ug/kg	120	32.	1
Chrysene	1800		ug/kg	120	21.	1
Acenaphthylene	63	J	ug/kg	160	31.	1
Anthracene	1000		ug/kg	120	40.	1
Benzo(ghi)perylene	890		ug/kg	160	24.	1
Fluorene	510		ug/kg	200	20.	1
Phenanthrene	3700		ug/kg	120	25.	1
Dibenzo(a,h)anthracene	230		ug/kg	120	23.	1
Indeno(1,2,3-cd)pyrene	990		ug/kg	160	28.	1
Pyrene	3400		ug/kg	120	20.	1
Dibenzofuran	310		ug/kg	200	19.	1
Pentachlorophenol	ND		ug/kg	160	44.	1
Phenol	ND		ug/kg	200	31.	1
2-Methylphenol	ND		ug/kg	200	31.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	32.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-20 Date Collected: 09/07/18 08:00

Client ID: PILE 1 COMP-3 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	66		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	77		30-120
2,4,6-Tribromophenol	80		10-136
4-Terphenyl-d14	74		18-120

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21
Client ID: PILE 1 COMP-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 13:58
Analyst: RC
Percent Solids: 82%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	340		ug/kg	160	21.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Fluoranthene	4900		ug/kg	120	23.	1
Naphthalene	72	J	ug/kg	200	24.	1
Benzo(a)anthracene	2100		ug/kg	120	22.	1
Benzo(a)pyrene	1800		ug/kg	160	49.	1
Benzo(b)fluoranthene	2400		ug/kg	120	34.	1
Benzo(k)fluoranthene	880		ug/kg	120	32.	1
Chrysene	2100		ug/kg	120	21.	1
Acenaphthylene	90	J	ug/kg	160	31.	1
Anthracene	880		ug/kg	120	39.	1
Benzo(ghi)perylene	1000		ug/kg	160	24.	1
Fluorene	390		ug/kg	200	19.	1
Phenanthrene	3700		ug/kg	120	24.	1
Dibenzo(a,h)anthracene	260		ug/kg	120	23.	1
Indeno(1,2,3-cd)pyrene	1100		ug/kg	160	28.	1
Pyrene	3800		ug/kg	120	20.	1
Dibenzofuran	210		ug/kg	200	19.	1
Pentachlorophenol	ND		ug/kg	160	44.	1
Phenol	ND		ug/kg	200	30.	1
2-Methylphenol	ND		ug/kg	200	31.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	290	31.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21 Date Collected: 09/07/18 08:30

Client ID: PILE 1 COMP-4 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		25-120
Phenol-d6	58		10-120
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	61		30-120
2,4,6-Tribromophenol	61		10-136
4-Terphenyl-d14	58		18-120

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-22
Client ID: PILE 1 COMP-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 14:24
Analyst: RC
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	87	J	ug/kg	160	20.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Fluoranthene	1900		ug/kg	120	22.	1
Naphthalene	48	J	ug/kg	200	24.	1
Benzo(a)anthracene	860		ug/kg	120	22.	1
Benzo(a)pyrene	800		ug/kg	160	48.	1
Benzo(b)fluoranthene	1100		ug/kg	120	33.	1
Benzo(k)fluoranthene	400		ug/kg	120	31.	1
Chrysene	910		ug/kg	120	20.	1
Acenaphthylene	53	J	ug/kg	160	30.	1
Anthracene	230		ug/kg	120	38.	1
Benzo(ghi)perylene	520		ug/kg	160	23.	1
Fluorene	88	J	ug/kg	200	19.	1
Phenanthrene	1100		ug/kg	120	24.	1
Dibenzo(a,h)anthracene	120		ug/kg	120	23.	1
Indeno(1,2,3-cd)pyrene	560		ug/kg	160	27.	1
Pyrene	1500		ug/kg	120	19.	1
Dibenzofuran	59	J	ug/kg	200	18.	1
Pentachlorophenol	ND		ug/kg	160	43.	1
Phenol	ND		ug/kg	200	30.	1
2-Methylphenol	ND		ug/kg	200	30.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	280	31.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-22 Date Collected: 09/07/18 09:00

Client ID: PILE 1 COMP-5 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		25-120
Phenol-d6	57		10-120
Nitrobenzene-d5	61		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	63		10-136
4-Terphenyl-d14	55		18-120

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-23
Client ID: PILE 1 COMP-6
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 14:50
Analyst: RC
Percent Solids: 89%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	840		ug/kg	150	19.	1
Hexachlorobenzene	ND		ug/kg	110	21.	1
Fluoranthene	6100		ug/kg	110	21.	1
Naphthalene	150	J	ug/kg	180	22.	1
Benzo(a)anthracene	2500		ug/kg	110	21.	1
Benzo(a)pyrene	2000		ug/kg	150	45.	1
Benzo(b)fluoranthene	2700		ug/kg	110	31.	1
Benzo(k)fluoranthene	920		ug/kg	110	30.	1
Chrysene	2300		ug/kg	110	19.	1
Acenaphthylene	120	J	ug/kg	150	29.	1
Anthracene	1300		ug/kg	110	36.	1
Benzo(ghi)perylene	1200		ug/kg	150	22.	1
Fluorene	690		ug/kg	180	18.	1
Phenanthrene	5200		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	260		ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	1300		ug/kg	150	26.	1
Pyrene	4900		ug/kg	110	18.	1
Dibenzofuran	580		ug/kg	180	18.	1
Pentachlorophenol	ND		ug/kg	150	41.	1
Phenol	ND		ug/kg	180	28.	1
2-Methylphenol	ND		ug/kg	180	29.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	29.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-23 Date Collected: 09/07/18 10:00

Client ID: PILE 1 COMP-6 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		25-120
Phenol-d6	64		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	68		30-120
2,4,6-Tribromophenol	72		10-136
4-Terphenyl-d14	63		18-120

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-24
Client ID: PILE 1 COMP-7
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 15:16
Analyst: RC
Percent Solids: 87%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	740		ug/kg	150	19.	1
Hexachlorobenzene	ND		ug/kg	110	21.	1
Fluoranthene	6700		ug/kg	110	22.	1
Naphthalene	130	J	ug/kg	190	23.	1
Benzo(a)anthracene	2900		ug/kg	110	21.	1
Benzo(a)pyrene	2600		ug/kg	150	46.	1
Benzo(b)fluoranthene	3300		ug/kg	110	32.	1
Benzo(k)fluoranthene	1200		ug/kg	110	30.	1
Chrysene	2700		ug/kg	110	20.	1
Acenaphthylene	78	J	ug/kg	150	29.	1
Anthracene	1600		ug/kg	110	37.	1
Benzo(ghi)perylene	1300		ug/kg	150	22.	1
Fluorene	750		ug/kg	190	18.	1
Phenanthrene	5700		ug/kg	110	23.	1
Dibenzo(a,h)anthracene	340		ug/kg	110	22.	1
Indeno(1,2,3-cd)pyrene	1500		ug/kg	150	26.	1
Pyrene	5300		ug/kg	110	19.	1
Dibenzofuran	440		ug/kg	190	18.	1
Pentachlorophenol	ND		ug/kg	150	41.	1
Phenol	ND		ug/kg	190	28.	1
2-Methylphenol	ND		ug/kg	190	29.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	270	29.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-24 Date Collected: 09/07/18 11:00

Client ID: PILE 1 COMP-7 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		25-120
Phenol-d6	70		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	72		30-120
2,4,6-Tribromophenol	78		10-136
4-Terphenyl-d14	66		18-120

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-30
Client ID: PILE 2 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 12:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 15:43
Analyst: RC
Percent Solids: 73%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	120	J	ug/kg	180	23.	1
Hexachlorobenzene	ND		ug/kg	130	25.	1
Fluoranthene	1800		ug/kg	130	26.	1
Naphthalene	48	J	ug/kg	220	27.	1
Benzo(a)anthracene	840		ug/kg	130	25.	1
Benzo(a)pyrene	780		ug/kg	180	55.	1
Benzo(b)fluoranthene	1100		ug/kg	130	38.	1
Benzo(k)fluoranthene	360		ug/kg	130	36.	1
Chrysene	860		ug/kg	130	23.	1
Acenaphthylene	57	J	ug/kg	180	35.	1
Anthracene	320		ug/kg	130	44.	1
Benzo(ghi)perylene	490		ug/kg	180	26.	1
Fluorene	120	J	ug/kg	220	22.	1
Phenanthrene	1200		ug/kg	130	27.	1
Dibenzo(a,h)anthracene	120	J	ug/kg	130	26.	1
Indeno(1,2,3-cd)pyrene	530		ug/kg	180	31.	1
Pyrene	1400		ug/kg	130	22.	1
Dibenzofuran	73	J	ug/kg	220	21.	1
Pentachlorophenol	ND		ug/kg	180	49.	1
Phenol	ND		ug/kg	220	34.	1
2-Methylphenol	ND		ug/kg	220	35.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	320	35.	1

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-30 Date Collected: 09/07/18 12:00

Client ID: PILE 2 COMP-1 Date Received: 09/07/18

Sample Location: 1827 FILLMORE AVE. Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	61		25-120
Phenol-d6	61		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	65		30-120
2,4,6-Tribromophenol	66		10-136
4-Terphenyl-d14	56		18-120

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-31 D
Client ID: PILE 2 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 09/11/18 17:01
Analyst: RC
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 22:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	520	J	ug/kg	710	92.	5
Hexachlorobenzene	ND		ug/kg	530	99.	5
Fluoranthene	6600		ug/kg	530	100	5
Naphthalene	140	J	ug/kg	880	110	5
Benzo(a)anthracene	2700		ug/kg	530	100	5
Benzo(a)pyrene	2300		ug/kg	710	220	5
Benzo(b)fluoranthene	3400		ug/kg	530	150	5
Benzo(k)fluoranthene	1200		ug/kg	530	140	5
Chrysene	2800		ug/kg	530	92.	5
Acenaphthylene	150	J	ug/kg	710	140	5
Anthracene	920		ug/kg	530	170	5
Benzo(ghi)perylene	1600		ug/kg	710	100	5
Fluorene	480	J	ug/kg	880	86.	5
Phenanthrene	4700		ug/kg	530	110	5
Dibenzo(a,h)anthracene	390	J	ug/kg	530	100	5
Indeno(1,2,3-cd)pyrene	1600		ug/kg	710	120	5
Pyrene	5100		ug/kg	530	88.	5
Dibenzofuran	340	J	ug/kg	880	84.	5
Pentachlorophenol	ND		ug/kg	710	190	5
Phenol	ND		ug/kg	880	130	5
2-Methylphenol	ND		ug/kg	880	140	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1300	140	5

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-31 D
Client ID: PILE 2 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		25-120
Phenol-d6	47		10-120
Nitrobenzene-d5	50		23-120
2-Fluorobiphenyl	50		30-120
2,4,6-Tribromophenol	48		10-136
4-Terphenyl-d14	46		18-120

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/10/18 23:33
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 09/10/18 16:53

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 18-24,30-31 Batch: WG1155339-1					
Acenaphthene	ND		ug/kg	130	17.
Hexachlorobenzene	ND		ug/kg	98	18.
Fluoranthene	ND		ug/kg	98	19.
Naphthalene	ND		ug/kg	160	20.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	27.
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.
Dibenzofuran	ND		ug/kg	160	15.
Pentachlorophenol	ND		ug/kg	130	36.
Phenol	ND		ug/kg	160	24.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	25.
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ug/kg		

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 09/10/18 23:33
Analyst: RC

Extraction Method: EPA 3546
Extraction Date: 09/10/18 16:53

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 18-24,30-31 Batch: WG1155339-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	77		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	65		30-120
2,4,6-Tribromophenol	68		10-136
4-Terphenyl-d14	64		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 18-24,30-31 Batch: WG1155339-2 WG1155339-3								
Acenaphthene	76		77		31-137	1		50
Hexachlorobenzene	76		76		40-140	0		50
Fluoranthene	78		78		40-140	0		50
Naphthalene	75		77		40-140	3		50
Benzo(a)anthracene	76		77		40-140	1		50
Benzo(a)pyrene	80		81		40-140	1		50
Benzo(b)fluoranthene	77		80		40-140	4		50
Benzo(k)fluoranthene	73		75		40-140	3		50
Chrysene	78		78		40-140	0		50
Acenaphthylene	78		79		40-140	1		50
Anthracene	79		82		40-140	4		50
Benzo(ghi)perylene	74		77		40-140	4		50
Fluorene	77		79		40-140	3		50
Phenanthrene	77		78		40-140	1		50
Dibenzo(a,h)anthracene	74		76		40-140	3		50
Indeno(1,2,3-cd)pyrene	76		77		40-140	1		50
Pyrene	76		78		35-142	3		50
Dibenzofuran	75		76		40-140	1		50
Pentachlorophenol	60		61		17-109	2		50
Phenol	83		88		26-90	6		50
2-Methylphenol	83		90		30-130.	8		50
3-Methylphenol/4-Methylphenol	85		89		30-130	5		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 18-24,30-31 Batch: WG1155339-2 WG1155339-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	82		85		25-120
Phenol-d6	89		92		10-120
Nitrobenzene-d5	90		94		23-120
2-Fluorobiphenyl	77		78		30-120
2,4,6-Tribromophenol	79		77		10-136
4-Terphenyl-d14	72		73		18-120

PCBS

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-18
Client ID: PILE 1 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 14:10
Analyst: JW
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.4	3.33	1	A
Aroclor 1221	ND		ug/kg	37.4	3.75	1	A
Aroclor 1232	ND		ug/kg	37.4	7.94	1	A
Aroclor 1242	ND		ug/kg	37.4	5.05	1	A
Aroclor 1248	ND		ug/kg	37.4	5.62	1	A
Aroclor 1254	ND		ug/kg	37.4	4.10	1	A
Aroclor 1260	ND		ug/kg	37.4	6.92	1	A
Aroclor 1262	ND		ug/kg	37.4	4.76	1	A
Aroclor 1268	ND		ug/kg	37.4	3.88	1	A
PCBs, Total	ND		ug/kg	37.4	3.33	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	44		30-150	A
2,4,5,6-Tetrachloro-m-xylene	51		30-150	B
Decachlorobiphenyl	50		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-19
Client ID: PILE 1 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 14:23
Analyst: JW
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	39.4	3.50	1	A
Aroclor 1221	ND		ug/kg	39.4	3.95	1	A
Aroclor 1232	ND		ug/kg	39.4	8.36	1	A
Aroclor 1242	ND		ug/kg	39.4	5.31	1	A
Aroclor 1248	ND		ug/kg	39.4	5.91	1	A
Aroclor 1254	ND		ug/kg	39.4	4.31	1	A
Aroclor 1260	ND		ug/kg	39.4	7.28	1	A
Aroclor 1262	ND		ug/kg	39.4	5.01	1	A
Aroclor 1268	ND		ug/kg	39.4	4.08	1	A
PCBs, Total	ND		ug/kg	39.4	3.50	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	53		30-150	A
Decachlorobiphenyl	45		30-150	A
2,4,5,6-Tetrachloro-m-xylene	55		30-150	B
Decachlorobiphenyl	55		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-20
Client ID: PILE 1 COMP-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 14:36
Analyst: JW
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	40.7	3.62	1	A
Aroclor 1221	ND		ug/kg	40.7	4.08	1	A
Aroclor 1232	ND		ug/kg	40.7	8.64	1	A
Aroclor 1242	ND		ug/kg	40.7	5.49	1	A
Aroclor 1248	ND		ug/kg	40.7	6.11	1	A
Aroclor 1254	ND		ug/kg	40.7	4.46	1	A
Aroclor 1260	ND		ug/kg	40.7	7.53	1	B
Aroclor 1262	ND		ug/kg	40.7	5.17	1	A
Aroclor 1268	ND		ug/kg	40.7	4.22	1	A
PCBs, Total	ND		ug/kg	40.7	3.62	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	47		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	48		30-150	B
Decachlorobiphenyl	47		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21
Client ID: PILE 1 COMP-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 14:49
Analyst: JW
Percent Solids: 82%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	39.7	3.52	1	A
Aroclor 1221	ND		ug/kg	39.7	3.98	1	A
Aroclor 1232	ND		ug/kg	39.7	8.41	1	A
Aroclor 1242	ND		ug/kg	39.7	5.35	1	A
Aroclor 1248	ND		ug/kg	39.7	5.95	1	A
Aroclor 1254	ND		ug/kg	39.7	4.34	1	A
Aroclor 1260	ND		ug/kg	39.7	7.33	1	A
Aroclor 1262	ND		ug/kg	39.7	5.04	1	A
Aroclor 1268	ND		ug/kg	39.7	4.11	1	A
PCBs, Total	ND		ug/kg	39.7	3.52	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	54		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-22
Client ID: PILE 1 COMP-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 15:02
Analyst: JW
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	39.4	3.50	1	A
Aroclor 1221	ND		ug/kg	39.4	3.95	1	A
Aroclor 1232	ND		ug/kg	39.4	8.36	1	A
Aroclor 1242	ND		ug/kg	39.4	5.31	1	A
Aroclor 1248	ND		ug/kg	39.4	5.91	1	A
Aroclor 1254	ND		ug/kg	39.4	4.31	1	A
Aroclor 1260	ND		ug/kg	39.4	7.28	1	A
Aroclor 1262	ND		ug/kg	39.4	5.00	1	A
Aroclor 1268	ND		ug/kg	39.4	4.08	1	A
PCBs, Total	ND		ug/kg	39.4	3.50	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	42		30-150	A
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	50		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-23
Client ID: PILE 1 COMP-6
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 15:14
Analyst: JW
Percent Solids: 89%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.4	3.14	1	A
Aroclor 1221	ND		ug/kg	35.4	3.54	1	A
Aroclor 1232	ND		ug/kg	35.4	7.50	1	A
Aroclor 1242	ND		ug/kg	35.4	4.77	1	A
Aroclor 1248	ND		ug/kg	35.4	5.31	1	A
Aroclor 1254	ND		ug/kg	35.4	3.87	1	A
Aroclor 1260	ND		ug/kg	35.4	6.54	1	A
Aroclor 1262	ND		ug/kg	35.4	4.49	1	A
Aroclor 1268	ND		ug/kg	35.4	3.67	1	A
PCBs, Total	ND		ug/kg	35.4	3.14	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	48		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	57		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-24
Client ID: PILE 1 COMP-7
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 15:27
Analyst: JW
Percent Solids: 87%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.3	3.40	1	A
Aroclor 1221	ND		ug/kg	38.3	3.84	1	A
Aroclor 1232	ND		ug/kg	38.3	8.13	1	A
Aroclor 1242	ND		ug/kg	38.3	5.17	1	A
Aroclor 1248	ND		ug/kg	38.3	5.75	1	A
Aroclor 1254	ND		ug/kg	38.3	4.19	1	A
Aroclor 1260	22.6	J	ug/kg	38.3	7.08	1	B
Aroclor 1262	ND		ug/kg	38.3	4.87	1	A
Aroclor 1268	ND		ug/kg	38.3	3.97	1	A
PCBs, Total	22.6	J	ug/kg	38.3	3.40	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	51		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		30-150	B
Decachlorobiphenyl	61		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-30
Client ID: PILE 2 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 12:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 13:44
Analyst: JW
Percent Solids: 73%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	44.6	3.96	1	A
Aroclor 1221	ND		ug/kg	44.6	4.47	1	A
Aroclor 1232	ND		ug/kg	44.6	9.46	1	A
Aroclor 1242	ND		ug/kg	44.6	6.02	1	A
Aroclor 1248	ND		ug/kg	44.6	6.70	1	A
Aroclor 1254	ND		ug/kg	44.6	4.88	1	A
Aroclor 1260	ND		ug/kg	44.6	8.25	1	A
Aroclor 1262	ND		ug/kg	44.6	5.67	1	A
Aroclor 1268	ND		ug/kg	44.6	4.62	1	A
PCBs, Total	ND		ug/kg	44.6	3.96	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	52		30-150	A
2,4,5,6-Tetrachloro-m-xylene	53		30-150	B
Decachlorobiphenyl	65		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-31
Client ID: PILE 2 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 09/11/18 13:57
Analyst: JW
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:17
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	35.6	3.16	1	A
Aroclor 1221	ND		ug/kg	35.6	3.57	1	A
Aroclor 1232	ND		ug/kg	35.6	7.55	1	A
Aroclor 1242	ND		ug/kg	35.6	4.80	1	A
Aroclor 1248	ND		ug/kg	35.6	5.34	1	A
Aroclor 1254	22.5	J	ug/kg	35.6	3.90	1	B
Aroclor 1260	24.0	J	ug/kg	35.6	6.58	1	B
Aroclor 1262	ND		ug/kg	35.6	4.52	1	A
Aroclor 1268	ND		ug/kg	35.6	3.69	1	A
PCBs, Total	46.5	J	ug/kg	35.6	3.16	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	59		30-150	B
Decachlorobiphenyl	67		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 09/11/18 07:12
Analyst: AWS

Extraction Method: EPA 3546
Extraction Date: 09/10/18 21:32
Cleanup Method: EPA 3665A
Cleanup Date: 09/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 18-24,30-31 Batch: WG1155390-1						
Aroclor 1016	ND		ug/kg	31.9	2.83	A
Aroclor 1221	ND		ug/kg	31.9	3.20	A
Aroclor 1232	ND		ug/kg	31.9	6.76	A
Aroclor 1242	ND		ug/kg	31.9	4.30	A
Aroclor 1248	ND		ug/kg	31.9	4.79	A
Aroclor 1254	ND		ug/kg	31.9	3.49	A
Aroclor 1260	ND		ug/kg	31.9	5.90	A
Aroclor 1262	ND		ug/kg	31.9	4.05	A
Aroclor 1268	ND		ug/kg	31.9	3.30	A
PCBs, Total	ND		ug/kg	31.9	2.83	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	71		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 18-24,30-31 Batch: WG1155390-2 WG1155390-3									
Aroclor 1016	72		86		40-140	18		50	A
Aroclor 1260	67		82		40-140	20		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		74		30-150	A
Decachlorobiphenyl	70		75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		79		30-150	B
Decachlorobiphenyl	67		76		30-150	B

PESTICIDES

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-18
Client ID: PILE 1 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 15:50
Analyst: KEG
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.85	0.362	1	A
Lindane	ND		ug/kg	0.770	0.344	1	A
Alpha-BHC	ND		ug/kg	0.770	0.219	1	A
Beta-BHC	ND		ug/kg	1.85	0.701	1	A
Heptachlor	ND		ug/kg	0.924	0.414	1	A
Aldrin	ND		ug/kg	1.85	0.651	1	A
Endrin	ND		ug/kg	0.770	0.316	1	A
Dieldrin	4.47		ug/kg	1.16	0.578	1	A
4,4'-DDE	37.6		ug/kg	1.85	0.428	1	A
4,4'-DDD	23.7		ug/kg	1.85	0.659	1	A
4,4'-DDT	45.2		ug/kg	3.47	1.49	1	A
Endosulfan I	ND		ug/kg	1.85	0.437	1	A
Endosulfan II	ND		ug/kg	1.85	0.618	1	A
Endosulfan sulfate	ND		ug/kg	0.770	0.367	1	A
cis-Chlordane	22.7		ug/kg	2.31	0.644	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	B
Decachlorobiphenyl	91		30-150	B
2,4,5,6-Tetrachloro-m-xylene	92		30-150	A
Decachlorobiphenyl	99		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-18
Client ID: PILE 1 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/13/18 22:54
Analyst: KEG
Percent Solids: 84%
Methylation Date: 09/12/18 09:44

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	196	5.22	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	109		30-150	A
DCAA	84		30-150	B

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-19
Client ID: PILE 1 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 16:03
Analyst: KEG
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.88	0.369	1	A
Lindane	ND		ug/kg	0.784	0.350	1	A
Alpha-BHC	ND		ug/kg	0.784	0.223	1	A
Beta-BHC	ND		ug/kg	1.88	0.714	1	A
Heptachlor	ND		ug/kg	0.941	0.422	1	A
Aldrin	ND		ug/kg	1.88	0.663	1	A
Endrin	ND		ug/kg	0.784	0.322	1	A
Dieldrin	ND		ug/kg	1.18	0.588	1	A
4,4'-DDE	66.3		ug/kg	1.88	0.435	1	A
4,4'-DDD	4.65		ug/kg	1.88	0.671	1	A
4,4'-DDT	55.4		ug/kg	3.53	1.51	1	A
Endosulfan I	ND		ug/kg	1.88	0.445	1	A
Endosulfan II	ND		ug/kg	1.88	0.629	1	A
Endosulfan sulfate	ND		ug/kg	0.784	0.373	1	A
cis-Chlordane	11.5		ug/kg	2.35	0.656	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	102		30-150	B
2,4,5,6-Tetrachloro-m-xylene	83		30-150	A
Decachlorobiphenyl	78		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-19
Client ID: PILE 1 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/13/18 23:13
Analyst: KEG
Percent Solids: 84%
Methylation Date: 09/12/18 09:44

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	196	5.21	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	148		30-150	A
DCAA	83		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-20
Client ID: PILE 1 COMP-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 16:16
Analyst: KEG
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.91	0.375	1	A
Lindane	ND		ug/kg	0.797	0.356	1	A
Alpha-BHC	ND		ug/kg	0.797	0.226	1	A
Beta-BHC	ND		ug/kg	1.91	0.725	1	A
Heptachlor	ND		ug/kg	0.956	0.429	1	A
Aldrin	ND		ug/kg	1.91	0.674	1	A
Endrin	ND		ug/kg	0.797	0.327	1	A
Dieldrin	ND		ug/kg	1.20	0.598	1	A
4,4'-DDE	9.34		ug/kg	1.91	0.442	1	A
4,4'-DDD	3.14		ug/kg	1.91	0.682	1	A
4,4'-DDT	10.8		ug/kg	3.59	1.54	1	B
Endosulfan I	ND		ug/kg	1.91	0.452	1	A
Endosulfan II	ND		ug/kg	1.91	0.639	1	A
Endosulfan sulfate	ND		ug/kg	0.797	0.379	1	A
cis-Chlordane	6.60		ug/kg	2.39	0.666	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	93		30-150	B
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	73		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-20
Client ID: PILE 1 COMP-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/13/18 23:31
Analyst: KEG
Percent Solids: 80%
Methylation Date: 09/12/18 09:44

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	207	5.50	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	146		30-150	A
DCAA	83		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21
Client ID: PILE 1 COMP-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 16:28
Analyst: KEG
Percent Solids: 82%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.88	0.368	1	A
Lindane	ND		ug/kg	0.783	0.350	1	A
Alpha-BHC	ND		ug/kg	0.783	0.222	1	A
Beta-BHC	ND		ug/kg	1.88	0.712	1	A
Heptachlor	ND		ug/kg	0.939	0.421	1	A
Aldrin	ND		ug/kg	1.88	0.662	1	A
Endrin	ND		ug/kg	0.783	0.321	1	A
Dieldrin	ND		ug/kg	1.17	0.587	1	A
4,4'-DDE	178	E	ug/kg	1.88	0.434	1	A
4,4'-DDD	3.64		ug/kg	1.88	0.670	1	A
4,4'-DDT	123		ug/kg	3.52	1.51	1	A
Endosulfan I	ND		ug/kg	1.88	0.444	1	A
Endosulfan II	ND		ug/kg	1.88	0.628	1	A
Endosulfan sulfate	ND		ug/kg	0.783	0.373	1	A
cis-Chlordane	1.76	JPI	ug/kg	2.35	0.654	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	108		30-150	B
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	73		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21
Client ID: PILE 1 COMP-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/13/18 23:50
Analyst: KEG
Percent Solids: 82%
Methylation Date: 09/12/18 09:44

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	198	5.27	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	139		30-150	A
DCAA	80		30-150	B

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21 D
Client ID: PILE 1 COMP-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/14/18 13:19
Analyst: KEG
Percent Solids: 82%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
4,4'-DDE	153		ug/kg	3.76	0.869	2	A

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-22
Client ID: PILE 1 COMP-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 16:41
Analyst: KEG
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.89	0.371	1	A
Lindane	ND		ug/kg	0.789	0.353	1	A
Alpha-BHC	ND		ug/kg	0.789	0.224	1	A
Beta-BHC	ND		ug/kg	1.89	0.718	1	A
Heptachlor	ND		ug/kg	0.947	0.425	1	A
Aldrin	ND		ug/kg	1.89	0.667	1	A
Endrin	ND		ug/kg	0.789	0.324	1	A
Dieldrin	ND		ug/kg	1.18	0.592	1	A
4,4'-DDE	52.7		ug/kg	1.89	0.438	1	A
4,4'-DDD	1.66	J	ug/kg	1.89	0.676	1	A
4,4'-DDT	49.1		ug/kg	3.55	1.52	1	A
Endosulfan I	ND		ug/kg	1.89	0.448	1	A
Endosulfan II	ND		ug/kg	1.89	0.633	1	A
Endosulfan sulfate	ND		ug/kg	0.789	0.376	1	A
cis-Chlordane	7.75		ug/kg	2.37	0.660	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	75		30-150	B
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	66		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-22
Client ID: PILE 1 COMP-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/14/18 00:09
Analyst: KEG
Percent Solids: 84%
Methylation Date: 09/12/18 09:44

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	194	5.16	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	142		30-150	A
DCAA	83		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-23
Client ID: PILE 1 COMP-6
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 16:54
Analyst: KEG
Percent Solids: 89%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.69	0.332	1	A
Lindane	ND		ug/kg	0.706	0.316	1	A
Alpha-BHC	ND		ug/kg	0.706	0.200	1	A
Beta-BHC	ND		ug/kg	1.69	0.642	1	A
Heptachlor	ND		ug/kg	0.847	0.380	1	A
Aldrin	ND		ug/kg	1.69	0.596	1	A
Endrin	ND		ug/kg	0.706	0.289	1	A
Dieldrin	ND		ug/kg	1.06	0.529	1	A
4,4'-DDE	22.6		ug/kg	1.69	0.392	1	A
4,4'-DDD	ND		ug/kg	1.69	0.604	1	A
4,4'-DDT	20.1		ug/kg	3.18	1.36	1	B
Endosulfan I	ND		ug/kg	1.69	0.400	1	A
Endosulfan II	ND		ug/kg	1.69	0.566	1	A
Endosulfan sulfate	ND		ug/kg	0.706	0.336	1	A
cis-Chlordane	5.72	PI	ug/kg	2.12	0.590	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	81		30-150	B
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	76		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-23
Client ID: PILE 1 COMP-6
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/14/18 00:46
Analyst: KEG
Percent Solids: 89%
Methylation Date: 09/12/18 09:44

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	185	4.92	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	113		30-150	A
DCAA	83		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-24
Client ID: PILE 1 COMP-7
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 17:07
Analyst: KEG
Percent Solids: 87%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.83	0.358	1	A
Lindane	ND		ug/kg	0.763	0.341	1	A
Alpha-BHC	ND		ug/kg	0.763	0.217	1	A
Beta-BHC	ND		ug/kg	1.83	0.694	1	A
Heptachlor	ND		ug/kg	0.915	0.410	1	A
Aldrin	ND		ug/kg	1.83	0.644	1	A
Endrin	ND		ug/kg	0.763	0.313	1	A
Dieldrin	ND		ug/kg	1.14	0.572	1	A
4,4'-DDE	23.5		ug/kg	1.83	0.423	1	A
4,4'-DDD	3.94		ug/kg	1.83	0.653	1	A
4,4'-DDT	22.4		ug/kg	3.43	1.47	1	A
Endosulfan I	ND		ug/kg	1.83	0.432	1	A
Endosulfan II	ND		ug/kg	1.83	0.612	1	A
Endosulfan sulfate	ND		ug/kg	0.763	0.363	1	A
cis-Chlordane	9.20	PI	ug/kg	2.29	0.638	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	123		30-150	B
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	84		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-24
Client ID: PILE 1 COMP-7
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/14/18 01:05
Analyst: KEG
Percent Solids: 87%
Methylation Date: 09/12/18 09:44

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	191	5.09	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	141		30-150	A
DCAA	81		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-30
Client ID: PILE 2 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 12:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 17:19
Analyst: KEG
Percent Solids: 73%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	2.15	0.422	1	A
Lindane	ND		ug/kg	0.897	0.401	1	A
Alpha-BHC	ND		ug/kg	0.897	0.255	1	A
Beta-BHC	ND		ug/kg	2.15	0.816	1	A
Heptachlor	ND		ug/kg	1.08	0.482	1	A
Aldrin	ND		ug/kg	2.15	0.758	1	A
Endrin	ND		ug/kg	0.897	0.368	1	A
Dieldrin	ND		ug/kg	1.34	0.673	1	A
4,4'-DDE	31.9		ug/kg	2.15	0.498	1	B
4,4'-DDD	1.93	J	ug/kg	2.15	0.768	1	B
4,4'-DDT	35.3		ug/kg	4.04	1.73	1	B
Endosulfan I	ND		ug/kg	2.15	0.508	1	A
Endosulfan II	ND		ug/kg	2.15	0.719	1	A
Endosulfan sulfate	ND		ug/kg	0.897	0.427	1	A
cis-Chlordane	7.21		ug/kg	2.69	0.750	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	B
Decachlorobiphenyl	96		30-150	B
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	63		30-150	A

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-30
Client ID: PILE 2 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 12:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/13/18 07:11
Analyst: KEG
Percent Solids: 73%
Methylation Date: 09/12/18 12:34

Extraction Method: EPA 8151A
Extraction Date: 09/12/18 00:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	223	5.93	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	114		30-150	A
DCAA	83		30-150	B

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-31
Client ID: PILE 2 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8151A
Analytical Date: 09/13/18 06:34
Analyst: KEG
Percent Solids: 93%
Methylation Date: 09/12/18 12:34

Extraction Method: EPA 8151A
Extraction Date: 09/12/18 00:03

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4,5-TP (Silvex)	ND		ug/kg	176	4.68	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	100		30-150	A
DCAA	85		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-31 D
Client ID: PILE 2 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 09/13/18 17:32
Analyst: KEG
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	16.2	3.17	10	A
Lindane	ND		ug/kg	6.75	3.02	10	A
Alpha-BHC	ND		ug/kg	6.75	1.92	10	A
Beta-BHC	ND		ug/kg	16.2	6.14	10	A
Heptachlor	ND		ug/kg	8.10	3.63	10	A
Aldrin	ND		ug/kg	16.2	5.70	10	A
Endrin	ND		ug/kg	6.75	2.77	10	A
Dieldrin	ND		ug/kg	10.1	5.06	10	A
4,4'-DDE	13.3	JPI	ug/kg	16.2	3.75	10	B
4,4'-DDD	11.2	J	ug/kg	16.2	5.78	10	B
4,4'-DDT	77.7		ug/kg	30.4	13.0	10	A
Endosulfan I	ND		ug/kg	16.2	3.83	10	A
Endosulfan II	ND		ug/kg	16.2	5.41	10	A
Endosulfan sulfate	ND		ug/kg	6.75	3.21	10	A
cis-Chlordane	ND		ug/kg	20.2	5.64	10	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	**269**	Q	30-150	B
2,4,5,6-Tetrachloro-m-xylene	85		30-150	A
Decachlorobiphenyl	108		30-150	A

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 09/13/18 15:12
Analyst: KEG

Extraction Method: EPA 3546
Extraction Date: 09/10/18 23:39
Cleanup Method: EPA 3620B
Cleanup Date: 09/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 18-24,30-31 Batch: WG1155407-1						
Delta-BHC	ND		ug/kg	1.58	0.309	A
Lindane	ND		ug/kg	0.657	0.294	A
Alpha-BHC	ND		ug/kg	0.657	0.186	A
Beta-BHC	ND		ug/kg	1.58	0.598	A
Heptachlor	ND		ug/kg	0.788	0.353	A
Aldrin	ND		ug/kg	1.58	0.555	A
Endrin	ND		ug/kg	0.657	0.269	A
Dieldrin	ND		ug/kg	0.986	0.493	A
4,4'-DDE	ND		ug/kg	1.58	0.365	A
4,4'-DDD	ND		ug/kg	1.58	0.562	A
4,4'-DDT	ND		ug/kg	2.96	1.27	A
Endosulfan I	ND		ug/kg	1.58	0.372	A
Endosulfan II	ND		ug/kg	1.58	0.527	A
Endosulfan sulfate	ND		ug/kg	0.657	0.313	A
cis-Chlordane	ND		ug/kg	1.97	0.549	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	92		30-150	B
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	67		30-150	A

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 09/12/18 10:48
Analyst: DGM

Extraction Method: EPA 8151A
Extraction Date: 09/11/18 09:51

Methylation Date: 09/12/18 08:00

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 18-24 Batch: WG1155581-1						
2,4,5-TP (Silvex)	ND		ug/kg	163	4.35	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	100		30-150	A
DCAA	83		30-150	B

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 09/13/18 04:04
Analyst: DGM

Extraction Method: EPA 8151A
Extraction Date: 09/12/18 00:03

Methylation Date: 09/12/18 12:34

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 30-31 Batch: WG1155844-1						
2,4,5-TP (Silvex)	ND		ug/kg	163	4.33	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	97		30-150	A
DCAA	80		30-150	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 18-24,30-31 Batch: WG1155407-2 WG1155407-3									
Delta-BHC	114		107		30-150	6		30	A
Lindane	114		108		30-150	5		30	A
Alpha-BHC	124		117		30-150	6		30	A
Beta-BHC	108		105		30-150	3		30	A
Heptachlor	126		121		30-150	4		30	A
Aldrin	121		113		30-150	7		30	A
Endrin	124		117		30-150	6		30	A
Dieldrin	132		123		30-150	7		30	A
4,4'-DDE	122		114		30-150	7		30	A
4,4'-DDD	128		122		30-150	5		30	A
4,4'-DDT	126		120		30-150	5		30	A
Endosulfan I	117		110		30-150	6		30	A
Endosulfan II	123		117		30-150	5		30	A
Endosulfan sulfate	131		122		30-150	7		30	A
cis-Chlordane	98		93		30-150	5		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		82		30-150	B
Decachlorobiphenyl	71		72		30-150	B
2,4,5,6-Tetrachloro-m-xylene	94		93		30-150	A
Decachlorobiphenyl	80		75		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 18-24 Batch: WG1155581-2 WG1155581-3									
2,4,5-TP (Silvex)	110		126		30-150	14		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	89		109		30-150	A
DCAA	90		93		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 30-31 Batch: WG1155844-2 WG1155844-3									
2,4,5-TP (Silvex)	103		103		30-150	0		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	95		91		30-150	A
DCAA	96		90		30-150	B

METALS

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-18
Client ID: PILE 1 COMP-1
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 07:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.12		mg/kg	0.468	0.097	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Barium, Total	98.4		mg/kg	0.468	0.082	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Beryllium, Total	0.356		mg/kg	0.234	0.015	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Cadmium, Total	0.829		mg/kg	0.468	0.046	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Chromium, Total	11.3		mg/kg	0.468	0.045	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Copper, Total	42.0		mg/kg	0.468	0.121	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Lead, Total	84.6		mg/kg	2.34	0.126	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Manganese, Total	300		mg/kg	0.468	0.075	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Mercury, Total	0.081		mg/kg	0.075	0.016	1	09/13/18 03:30	09/13/18 14:49	EPA 7471B	1,7471B	MG
Nickel, Total	11.8		mg/kg	1.17	0.113	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Selenium, Total	0.908	J	mg/kg	0.937	0.121	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Silver, Total	0.206	J	mg/kg	0.468	0.132	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
Zinc, Total	127		mg/kg	2.34	0.137	1	09/13/18 08:00	09/13/18 14:43	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	11		mg/kg	0.96	0.96	1		09/13/18 14:43	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-19
Client ID: PILE 1 COMP-2
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 07:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.70		mg/kg	0.450	0.094	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Barium, Total	126		mg/kg	0.450	0.078	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Beryllium, Total	0.513		mg/kg	0.225	0.015	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Cadmium, Total	2.15		mg/kg	0.450	0.044	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Chromium, Total	13.2		mg/kg	0.450	0.043	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Copper, Total	31.4		mg/kg	0.450	0.116	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Lead, Total	47.5		mg/kg	2.25	0.121	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Manganese, Total	615		mg/kg	0.450	0.072	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Mercury, Total	0.041	J	mg/kg	0.075	0.016	1	09/13/18 03:30	09/13/18 14:51	EPA 7471B	1,7471B	MG
Nickel, Total	9.96		mg/kg	1.12	0.109	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Selenium, Total	1.40		mg/kg	0.900	0.116	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Silver, Total	0.216	J	mg/kg	0.450	0.127	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
Zinc, Total	80.9		mg/kg	2.25	0.132	1	09/13/18 08:00	09/13/18 14:48	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	13		mg/kg	0.96	0.96	1		09/13/18 14:48	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-20
Client ID: PILE 1 COMP-3
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 08:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.29		mg/kg	0.488	0.101	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Barium, Total	70.6		mg/kg	0.488	0.085	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Beryllium, Total	0.424		mg/kg	0.244	0.016	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Cadmium, Total	0.776		mg/kg	0.488	0.048	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Chromium, Total	13.2		mg/kg	0.488	0.047	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Copper, Total	30.5		mg/kg	0.488	0.126	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Lead, Total	54.3		mg/kg	2.44	0.131	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Manganese, Total	317		mg/kg	0.488	0.078	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Mercury, Total	0.087		mg/kg	0.079	0.017	1	09/13/18 03:30	09/13/18 14:52	EPA 7471B	1,7471B	MG
Nickel, Total	14.1		mg/kg	1.22	0.118	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Selenium, Total	1.06		mg/kg	0.976	0.126	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Silver, Total	0.166	J	mg/kg	0.488	0.138	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
Zinc, Total	113		mg/kg	2.44	0.143	1	09/13/18 08:00	09/13/18 14:53	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	13		mg/kg	1.0	1.0	1		09/13/18 14:53	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21
Client ID: PILE 1 COMP-4
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 08:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.09		mg/kg	0.468	0.097	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Barium, Total	61.2		mg/kg	0.468	0.081	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Beryllium, Total	0.374		mg/kg	0.234	0.015	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Cadmium, Total	0.735		mg/kg	0.468	0.046	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Chromium, Total	12.5		mg/kg	0.468	0.045	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Copper, Total	23.0		mg/kg	0.468	0.121	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Lead, Total	76.2		mg/kg	2.34	0.125	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Manganese, Total	232		mg/kg	0.468	0.074	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Mercury, Total	0.102		mg/kg	0.077	0.016	1	09/13/18 03:30	09/13/18 14:54	EPA 7471B	1,7471B	MG
Nickel, Total	12.0		mg/kg	1.17	0.113	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Selenium, Total	0.992		mg/kg	0.936	0.121	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Silver, Total	0.187	J	mg/kg	0.468	0.132	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
Zinc, Total	99.2		mg/kg	2.34	0.137	1	09/13/18 08:00	09/13/18 14:59	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	12		mg/kg	0.97	0.97	1		09/13/18 14:59	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-22
Client ID: PILE 1 COMP-5
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 09:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.86		mg/kg	0.458	0.095	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Barium, Total	90.3		mg/kg	0.458	0.080	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Beryllium, Total	0.463		mg/kg	0.229	0.015	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Cadmium, Total	1.26		mg/kg	0.458	0.045	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Chromium, Total	14.4		mg/kg	0.458	0.044	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Copper, Total	23.6		mg/kg	0.458	0.118	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Lead, Total	63.5		mg/kg	2.29	0.123	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Manganese, Total	374		mg/kg	0.458	0.073	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Mercury, Total	0.068	J	mg/kg	0.075	0.016	1	09/13/18 03:30	09/13/18 15:00	EPA 7471B	1,7471B	MG
Nickel, Total	13.8		mg/kg	1.15	0.111	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Selenium, Total	1.86		mg/kg	0.917	0.118	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Silver, Total	0.220	J	mg/kg	0.458	0.130	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
Zinc, Total	192		mg/kg	2.29	0.134	1	09/13/18 08:00	09/13/18 15:04	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	14		mg/kg	0.95	0.95	1		09/13/18 15:04	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-23
Client ID: PILE 1 COMP-6
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 10:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.64		mg/kg	0.438	0.091	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Barium, Total	81.9		mg/kg	0.438	0.076	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Beryllium, Total	0.407		mg/kg	0.219	0.014	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Cadmium, Total	0.762		mg/kg	0.438	0.043	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Chromium, Total	10.7		mg/kg	0.438	0.042	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Copper, Total	34.2		mg/kg	0.438	0.113	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Lead, Total	77.3		mg/kg	2.19	0.117	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Manganese, Total	312		mg/kg	0.438	0.070	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Mercury, Total	0.085		mg/kg	0.071	0.015	1	09/13/18 03:30	09/13/18 15:01	EPA 7471B	1,7471B	MG
Nickel, Total	11.8		mg/kg	1.09	0.106	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Selenium, Total	1.00		mg/kg	0.876	0.113	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Silver, Total	0.197	J	mg/kg	0.438	0.124	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
Zinc, Total	117		mg/kg	2.19	0.128	1	09/13/18 08:00	09/13/18 15:08	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	11		mg/kg	0.90	0.90	1		09/13/18 15:08	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-24
Client ID: PILE 1 COMP-7
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 11:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.87		mg/kg	0.453	0.094	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Barium, Total	58.1		mg/kg	0.453	0.079	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Beryllium, Total	0.326		mg/kg	0.226	0.015	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Cadmium, Total	0.544		mg/kg	0.453	0.044	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Chromium, Total	9.72		mg/kg	0.453	0.044	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Copper, Total	16.9		mg/kg	0.453	0.117	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Lead, Total	36.0		mg/kg	2.26	0.121	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Manganese, Total	188		mg/kg	0.453	0.072	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Mercury, Total	0.060	J	mg/kg	0.072	0.015	1	09/13/18 03:30	09/13/18 15:03	EPA 7471B	1,7471B	MG
Nickel, Total	9.95		mg/kg	1.13	0.110	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Selenium, Total	0.748	J	mg/kg	0.906	0.117	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Silver, Total	ND		mg/kg	0.453	0.128	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
Zinc, Total	63.3		mg/kg	2.26	0.133	1	09/13/18 08:00	09/13/18 15:14	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	9.7		mg/kg	0.92	0.92	1		09/13/18 15:14	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-30
Client ID: PILE 2 COMP-1
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 12:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.84		mg/kg	0.536	0.112	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Barium, Total	109		mg/kg	0.536	0.093	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Beryllium, Total	0.488		mg/kg	0.268	0.018	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Cadmium, Total	0.794		mg/kg	0.536	0.053	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Chromium, Total	13.9		mg/kg	0.536	0.052	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Copper, Total	32.2		mg/kg	0.536	0.138	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Lead, Total	66.1		mg/kg	2.68	0.144	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Manganese, Total	2060		mg/kg	0.536	0.085	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Mercury, Total	0.093		mg/kg	0.085	0.018	1	09/13/18 03:30	09/13/18 15:05	EPA 7471B	1,7471B	MG
Nickel, Total	10.9		mg/kg	1.34	0.130	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Selenium, Total	1.34		mg/kg	1.07	0.138	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Silver, Total	0.520	J	mg/kg	0.536	0.152	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
Zinc, Total	131		mg/kg	2.68	0.157	1	09/13/18 08:00	09/13/18 15:19	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	14		mg/kg	1.1	1.1	1		09/13/18 15:19	NA	107,-	

Project Name: 1827 FILLMORE AVE.
Lab Number: L1835442
Project Number: B0421-017-001
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-31
Client ID: PILE 2 COMP-2
Sample Location: 1827 FILLMORE AVE.
Date Collected: 09/07/18 11:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.35		mg/kg	0.421	0.088	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Barium, Total	116		mg/kg	0.421	0.073	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Beryllium, Total	0.316		mg/kg	0.210	0.014	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Cadmium, Total	0.724		mg/kg	0.421	0.041	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Chromium, Total	11.1		mg/kg	0.421	0.040	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Copper, Total	41.3		mg/kg	0.421	0.109	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Lead, Total	83.3		mg/kg	2.10	0.113	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Manganese, Total	302		mg/kg	0.421	0.067	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Mercury, Total	0.069		mg/kg	0.068	0.014	1	09/13/18 03:30	09/13/18 15:07	EPA 7471B	1,7471B	MG
Nickel, Total	12.1		mg/kg	1.05	0.102	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Selenium, Total	0.947		mg/kg	0.842	0.109	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Silver, Total	0.130	J	mg/kg	0.421	0.119	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
Zinc, Total	206		mg/kg	2.10	0.123	1	09/13/18 08:00	09/13/18 15:24	EPA 3050B	1,6010D	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	11		mg/kg	0.86	0.86	1		09/13/18 15:24	NA	107,-	

Project Name: 1827 FILLMORE AVE. **Lab Number:** L1835442

Project Number: B0421-017-001 **Report Date:** 09/14/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 18-24,30-31 Batch: WG1156309-1										
Mercury, Total	ND		mg/kg	0.083	0.018	1	09/13/18 03:30	09/13/18 11:57	1,7471B	MG

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 18-24,30-31 Batch: WG1156351-1										
Arsenic, Total	ND		mg/kg	0.400	0.083	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Barium, Total	ND		mg/kg	0.400	0.070	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Beryllium, Total	ND		mg/kg	0.200	0.013	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Cadmium, Total	ND		mg/kg	0.400	0.039	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Chromium, Total	0.088	J	mg/kg	0.400	0.038	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Copper, Total	ND		mg/kg	0.400	0.103	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Lead, Total	ND		mg/kg	2.00	0.107	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Manganese, Total	0.172	J	mg/kg	0.400	0.064	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Nickel, Total	ND		mg/kg	1.00	0.097	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Selenium, Total	ND		mg/kg	0.800	0.103	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Silver, Total	ND		mg/kg	0.400	0.113	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE
Zinc, Total	ND		mg/kg	2.00	0.117	1	09/13/18 08:00	09/13/18 09:50	1,6010D	PE

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 18-24,30-31 Batch: WG1156309-2 SRM Lot Number: D102-540								
Mercury, Total	114		-		65-134	-		
Total Metals - Mansfield Lab Associated sample(s): 18-24,30-31 Batch: WG1156351-2 SRM Lot Number: D102-540								
Arsenic, Total	97		-		83-117	-		
Barium, Total	96		-		83-118	-		
Beryllium, Total	99		-		83-116	-		
Cadmium, Total	96		-		83-118	-		
Chromium, Total	95		-		83-117	-		
Copper, Total	98		-		84-116	-		
Lead, Total	91		-		82-118	-		
Manganese, Total	95		-		82-118	-		
Nickel, Total	96		-		83-117	-		
Selenium, Total	102		-		79-121	-		
Silver, Total	98		-		80-120	-		
Zinc, Total	95		-		81-118	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 18-24,30-31 QC Batch ID: WG1156309-3 WG1156309-4 QC Sample: L1835554-02 Client ID: MS Sample												
Mercury, Total	0.095J	0.357	0.572	**160**	Q	0.512	**143**	Q	80-120	11		20
Total Metals - Mansfield Lab Associated sample(s): 18-24,30-31 QC Batch ID: WG1156351-3 WG1156351-4 QC Sample: L1835607-01 Client ID: MS Sample												
Arsenic, Total	6.13	9.65	16.5	107		15.6	101		75-125	6		20
Barium, Total	51.0	161	197	91		200	95		75-125	2		20
Beryllium, Total	0.178J	4.02	4.05	101		3.99	102		75-125	1		20
Cadmium, Total	2.46	4.1	6.58	100		6.58	103		75-125	0		20
Chromium, Total	47.4	16.1	63.2	98		63.6	104		75-125	1		20
Copper, Total	21.2	20.1	40.5	96		39.4	93		75-125	3		20
Lead, Total	720.	41	1000	**682**	Q	828	**271**	Q	75-125	19		20
Manganese, Total	149.	40.2	171	**55**	Q	207	**149**	Q	75-125	19		20
Nickel, Total	18.0	40.2	56.1	95		52.8	89		75-125	6		20
Selenium, Total	1.28J	9.65	11.1	115		11.1	118		75-125	0		20
Silver, Total	ND	24.1	24.4	101		23.6	101		75-125	3		20
Zinc, Total	351.	40.2	425	**184**	Q	409	**149**	Q	75-125	4		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-01
Client ID: PILE 1 VOC-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 06:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.4		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-02
Client ID: PILE 1 VOC-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 06:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.7		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-03
Client ID: PILE 1 VOC-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.8		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-04
Client ID: PILE 1 VOC-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:20
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.3		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-05
Client ID: PILE 1 VOC-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:25
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.2		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-06
Client ID: PILE 1 VOC-6
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:35
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.8		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-07
Client ID: PILE 1 VOC-7
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.1		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-08
Client ID: PILE 1 VOC-8
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:55
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.3		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-09
Client ID: PILE 1 VOC-9
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:05
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.1		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-10
Client ID: PILE 1 VOC-10
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.8		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-11
Client ID: PILE 1 VOC-11
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.3		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-12
Client ID: PILE 1 VOC-12
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.0		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-13
Client ID: PILE 1 VOC-13
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.5		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-14
Client ID: PILE 1 VOC-14
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.0		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-15
Client ID: PILE 1 VOC-15
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 10:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.9		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-16
Client ID: PILE 1 VOC-16
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:05
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.3		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-17
Client ID: PILE 1 VOC-17
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:10
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.5		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-18
Client ID: PILE 1 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 07:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.8		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	0.61	J	mg/kg	1.2	0.25	1	09/11/18 11:10	09/12/18 09:27	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	0.955	0.191	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-19
Client ID: PILE 1 COMP-2
Sample Location: 1827 FILLMORE AVE.
Sample Depth:
Matrix: Soil

Date Collected: 09/07/18 07:30
Date Received: 09/07/18
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.5		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	0.54	J	mg/kg	1.1	0.24	1	09/11/18 11:10	09/12/18 09:30	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	0.958	0.192	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-20
Client ID: PILE 1 COMP-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.8		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	ND		mg/kg	1.2	0.26	1	09/11/18 11:10	09/12/18 09:31	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	1.00	0.200	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-21
Client ID: PILE 1 COMP-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 08:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.2		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	ND		mg/kg	1.1	0.24	1	09/11/18 11:10	09/12/18 09:32	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	0.973	0.195	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-22
Client ID: PILE 1 COMP-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 09:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.9		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	0.31	J	mg/kg	1.2	0.25	1	09/11/18 11:10	09/12/18 09:35	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	0.954	0.191	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-23
Client ID: PILE 1 COMP-6
Sample Location: 1827 FILLMORE AVE.
Sample Depth:
Matrix: Soil

Date Collected: 09/07/18 10:00
Date Received: 09/07/18
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.2		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	0.49	J	mg/kg	1.1	0.23	1	09/11/18 11:10	09/12/18 09:36	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	0.897	0.179	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-24
Client ID: PILE 1 COMP-7
Sample Location: 1827 FILLMORE AVE.
Sample Depth:
Matrix: Soil

Date Collected: 09/07/18 11:00
Date Received: 09/07/18
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.6		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	ND		mg/kg	1.1	0.23	1	09/11/18 11:10	09/12/18 09:37	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	0.924	0.185	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-25
Client ID: PILE 2 VOC-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:15
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.0		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-26
Client ID: PILE 2 VOC-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:20
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.6		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-27
Client ID: PILE 2 VOC-3
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:25
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	97.2		%	0.100	NA	1	-	09/11/18 14:00	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-28
Client ID: PILE 2 VOC-4
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:35
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.9		%	0.100	NA	1	-	09/11/18 14:55	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-29
Client ID: PILE 2 VOC-5
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:45
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	97.9		%	0.100	NA	1	-	09/11/18 14:55	121,2540G	AM

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-30
Client ID: PILE 2 COMP-1
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 12:00
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.4		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	0.35	J	mg/kg	1.3	0.27	1	09/11/18 11:10	09/12/18 09:39	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	1.09	0.218	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

SAMPLE RESULTS

Lab ID: L1835442-31
Client ID: PILE 2 COMP-2
Sample Location: 1827 FILLMORE AVE.

Date Collected: 09/07/18 11:30
Date Received: 09/07/18
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.8		%	0.100	NA	1	-	09/11/18 10:02	121,2540G	JK
Cyanide, Total	0.82	J	mg/kg	0.98	0.21	1	09/11/18 11:10	09/12/18 09:40	1,9010C/9012B	LH
Chromium, Hexavalent	ND		mg/kg	0.862	0.172	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001
Lab Number: L1835442
Report Date: 09/14/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 18-24,30-31 Batch: WG1155533-1										
Cyanide, Total	ND		mg/kg	0.92	0.19	1	09/11/18 11:10	09/12/18 10:01	1,9010C/9012B	LH
General Chemistry - Westborough Lab for sample(s): 18-24,30-31 Batch: WG1155857-1										
Chromium, Hexavalent	ND		mg/kg	0.800	0.160	1	09/11/18 19:15	09/13/18 10:43	1,7196A	NH

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 18-24,30-31 Batch: WG1155533-2 WG1155533-3								
Cyanide, Total	**72**	Q	**45**	Q	80-120	**48**	Q	35
General Chemistry - Westborough Lab Associated sample(s): 18-24,30-31 Batch: WG1155857-2								
Chromium, Hexavalent	82		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 18-24,30-31 QC Batch ID: WG1155533-4 WG1155533-5 QC Sample: L1835442-18 Client ID: PILE 1 COMP-1												
Cyanide, Total	0.61J	11	11	91		11	94		75-125	0		35
General Chemistry - Westborough Lab Associated sample(s): 18-24,30-31 QC Batch ID: WG1155857-4 QC Sample: L1835442-22 Client ID: PILE 1 COMP-5												
Chromium, Hexavalent	ND	1340	640	**48**	Q	-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: B0421-017-001

Lab Number: L1835442

Report Date: 09/14/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 18-24,30-31 QC Batch ID: WG1155586-1 QC Sample: L1834987-02 Client ID: DUP Sample						
Solids, Total	96.6	96.0	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-17,25-27 QC Batch ID: WG1155683-1 QC Sample: L1835442-01 Client ID: PILE 1 VOC-1						
Solids, Total	85.4	84.6	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 28-29 QC Batch ID: WG1155706-1 QC Sample: L1835738-01 Client ID: DUP Sample						
Solids, Total	79.8	85.5	%	7		20
General Chemistry - Westborough Lab Associated sample(s): 18-24,30-31 QC Batch ID: WG1155857-6 QC Sample: L1835442-22 Client ID: PILE 1 COMP-5						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
Report Date: 09/14/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1835442-01A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-01X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-01Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-01Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-02A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-02X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-02Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-02Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-03A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-03X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-03Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-03Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-04A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-04X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-04X1	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-04Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-04Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-05A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-05X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-05Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-05Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-06A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-06X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

Project Name: 1827 FILLMORE AVE.
Project Number: B0421-017-001

Lab Number: L1835442
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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1835442-06Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-06Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-07A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-07X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-07Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-07Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-08A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-08X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-08Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-08Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-09A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-09X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-09Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-09Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-10A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-10X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-10Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-10Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-11A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-11X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-11Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-11Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-12A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-12X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-12Y	Vial Water preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-12Z	Vial Water preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-13A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-13X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

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Report Date: 09/14/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1835442-13Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-13Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-14A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-14X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-14Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-14Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-15A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-15X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-15Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-15Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-16A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-16X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-16Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-16Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-17A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-17X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-17Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-17Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-18A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-18B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)
L1835442-19A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-19B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)

*Values in parentheses indicate holding time in days

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1835442-20A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-20B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)
L1835442-21A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-21B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)
L1835442-22A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-22B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)
L1835442-23A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-23B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)
L1835442-24A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-24B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)
L1835442-25A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-25X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-25Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-25Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-26A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-26X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-26Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)

*Values in parentheses indicate holding time in days

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1835442-26Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-27A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-27X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-27Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-27Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-28A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-28X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-28Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-28Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:24**	NYTCL-8260-R2(14)
L1835442-29A	Vial Large Septa unpreserved (4oz)	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14),TS(7)
L1835442-29X	Vial MeOH preserved split	A	NA		3.6	Y	Absent		NYTCL-8260-R2(14)
L1835442-29Y	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-29Z	Vial Water preserved split	A	NA		3.6	Y	Absent	**12-SEP-18 12:20**	NYTCL-8260-R2(14)
L1835442-30A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-30B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)
L1835442-31A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.6	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),CU-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),HG-T(28),MN-TI(180),CD-TI(180)
L1835442-31B	Glass 250ml/8oz unpreserved	A	NA		3.6	Y	Absent		NYTCL-8270(14),TCN-9010(14),HERB-APA(14),TS(7),NYTCL-8081(14),NYTCL-8082(14),HEXCR-7196(30)

*Values in parentheses indicate holding time in days

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GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample¿s toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1	- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1835442
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Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1835442
Project Number:	B0421-017-001	**Report Date:**	09/14/18

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 2

Date Rec'd in Lab: 9/19/18

ALPHA Job #: L1835442

Westborough, MA 01581, 8 Walkup Dr., TEL: 508-898-9220, FAX: 508-898-9193
Mansfield, MA 02048, 320 Forbes Blvd, TEL: 508-822-9300, FAX: 508-822-3288

Project Information
Project Name: 1827 Fillmore Ave
Project Location: 1827 Fillmore Ave
Project #: B0421-017-001
(Use Project name as Project #) ☐
Project Manager: Bryan Mayback
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: Turnkey
Address: 2558 Hamburg Turnpike
Buffalo NY 14218
Phone: 716 856-0599
Fax: 716 856-0583
Email: BMayback@Turnkeyllc.com

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Cat. B, NYSDEC EQuIS

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL+CP51 VOC's	Part 375 SVOC's	Part 375 Metals	Pesticides	PCB's				Sample Specific Comments	Total Bottles
35442-01	Pile 1 VOC-1	9/7/18	6:15	S	NS	X									1
-02	Pile 1 VOC-2		6:20			X									1
-03	Pile 1 VOC-3		7:15			X									1
-04	Pile 1 VOC-4		7:20			X									1
-05	Pile 1 VOC-5		7:25			X									1
-06	Pile 1 VOC-6		7:35			X									1
-07	Pile 1 VOC-7		7:45			X									1
-08	Pile 1 VOC-8		7:55			X									1
-09	Pile 1 VOC-9		8:05			X									1
-10	Pile 1 VOC-10		8:15			X									1

	TCL+CP51 VOC's	Part 375 SVOC's	Part 375 Metals	Pesticides	PCB's			
Container Type	A	A	A	A	A			
Preservative	O	O	O	O	O			

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/7/18 12:00	Jocelyn McCoy (AAL)	9/7/18 12:00
Jocelyn McCoy (AAL)	9/7/18 12:00	Wendy Moreno	9/8/18 01:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 2 of 4

Date Rec'd in Lab: 9/8/18

ALPHA Job #: L1835442

Client Information
Client: Turnkey
Address: 2558 Hamburg Turnpike
Buffalo, NY 14218
Phone: (716) 826-0599
Fax: (716) 826-0583
Email:

Project Information
Project Name: 1827 Fillmore Ave
Project Location: 1827 Fillmore Ave
Project #: B0421-017-001
(Use Project name as Project #) ☐
Project Manager: Bryan Maybeck
ALPHAQuote #:

Turn-Around Time
Standard* ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Cat B. NYSDEC EQuIS's

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL+TAL Soil's	Part 375 Soil's	CP-51 375 Metals	Pesticides	PCB's	Total Bottles	Sample Specific Comments
35442-11	Pile 1 Vol-11	9/7/18	8:45	S	NS	X					1	
-12	Pile 1 Vol-12		9:15			X					1	
-13	Pile 1 Vol-13		9:45			X					1	
-14	Pile 1 Vol-14		10:15			X					1	
-15	Pile 1 Vol-15		10:45			X					1	
-16	Pile 1 Vol-16		11:05			X					1	
-17	Pile 1 Vol-17		11:10			X					1	
-18	Pile 1 Comp-1		7:00				X	X	X	X	2	
-19	Pile 1 Comp-2		7:30				X	X	X	X	2	
-20	Pile 1 Comp-3		9:00				X	X	X	X	2	

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A	A	H	H	A				
Preservative	O	O	O	O	O				

Relinquished By:	Date/Time	Received By:	Date/Time
	9/7/18 12:00	Jocelyn Foley (AAL)	9/7/18 12:00
Jocelyn Foley (AAL)	9/7/18 12:00	Wesley Mowery	9/8/18 01:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 3 of 4

Date Rec'd in Lab: 9/8/18

ALPHA Job #: L1835442

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information
Project Name: 1827 Fillmore Ave
Project Location: 1827 Fillmore Ave
Project # B0421-017-001
(Use Project name as Project #) ☐
Project Manager: Bryan Mayback
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

Client Information
Client: Benchmark
Address: 2558 Hamburg Tpk
Buffalo NY 14218
Phone: (716) 856-0599
Fax: (716) 856-0583
Email:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Cat B, NYS Rel EQuIS
Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCL/CP-51 VOCs	Part 375 SVOCs	Part 375 metals	Pesticides	PCBs	Sample Specific Comments	Total Bottles
35442-21	Pile 1 COMP-4	9/7/18	8:30	S	NS		X	X	X	X		2
22	Pile 1 COMP-5		9:00				X	X	X	X		2
23	Pile 1 COMP-6		10:00				X	X	X	X		2
24	Pile 1 COMP-7		11:00				X	X	X	X		2
25	Pile 2 VOC 1		11:15			X						1
26	Pile 2 VOC 2		11:20			X						1
27	Pile 2 VOC 3		11:25			X						1
28	Pile 2 VOC 4		11:35			X						1
29	Pile 2 VOC 5		11:45			X						1
30	Pile 2 COMP-1		12:00				X	X	X	X		2
	Container Type					A	A	A	A	A		
	Preservative					O	O	O	O	O		

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/7/18 12:00	Jocelyn Foley (AAL)	9/7/18 12:00
Jocelyn Foley (AAL)	9/7/18 12:00	Wendy Mooney	9/8/18 01:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

NEW YORK CHAIN OF CUSTODY

ALPHA

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 4 of 4

Date Rec'd in Lab: 9/8/18

ALPHA Job #: L1835442

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Project Information
Project Name: 1827 Fillmore Ave
Project Location: 1827 Fillmore Ave
Project # B0421-017-001
(Use Project name as Project #) ☐
Project Manager: Bryan Mayback
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: Turnkey
Address: 2558 Hamburg Turnpike
Buffalo NY 14218
Phone: (716) 856-0599
Fax: (716) 856-0583
Email:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Cat B, NYSDEC EQuIS

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TICL P SVOC	Part 375 SVOCs	Part 375 Metals	Pesticides	PCBs				Sample Specific Comments	Total Bottles
35442-31	Pile 2 Comp-2	9/7/18	11:30	S	NS		X	X	X	X					2

Preservative Code	Container Code
A = None	P = Plastic
B = HCl	A = Amber Glass
C = HNO_3	V = Vial
D = H_2SO_4	G = Glass
E = NaOH	B = Bacteria Cup
F = MeOH	C = Cube
G = $NaHSO_4$	O = Other
H = $Na_2S_2O_3$	E = Encore
K/E = Zn Ac/NaOH	D = BOD Bottle
O = Other	

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A	A	A	A	A
Preservative	O	O	O	O	O

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	9/7/18 11:20	Jocelyn Filley (AAL)	9/7/18 12:00
Jocelyn Filley (AAL)	9/7/18 12:00	Wendy Maranay	9/8/18 01:15

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX C

SOIL CHARACTERIZATION ANALYTICAL RESULTS

APPENDIX C1: MW-6 AREA DELINEATION SOIL SAMPLE RESULTS

APPENDIX C2: OFFSITE SOIL CHARACTERIZATION RESULTS

APPENDIX C3: SB-21 AREA DELINEATION SOIL SAMPLE RESULTS

ANALYTICAL REPORT

Lab Number:	L1917177
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Bryan Mayback
Phone:	(716) 856-0599
Project Name:	1827 FILLMORE AVENUE SITE
Project Number:	B0421-017-001
Report Date:	04/29/19

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001

Lab Number: L1917177
Report Date: 04/29/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1917177-01	MW-6-1 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 13:00	04/25/19
L1917177-02	MW-6-2 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 13:30	04/25/19
L1917177-03	MW-6-3 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 14:00	04/25/19
L1917177-04	MW-6-4 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 14:30	04/25/19
L1917177-05	MW-6-5 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 14:45	04/25/19
L1917177-06	MW-6-6 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 15:00	04/25/19
L1917177-07	MW-6-7 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 15:15	04/25/19
L1917177-08	MW-6-8 8-12 FT	SOIL	1827 FILLMORE AVE	04/25/19 15:30	04/25/19

Project Name:	1827 FILLMORE AVENUE SITE	**Lab Number:**	L1917177
Project Number:	B0421-017-001	**Report Date:**	04/29/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	1827 FILLMORE AVENUE SITE	**Lab Number:**	L1917177
Project Number:	B0421-017-001	**Report Date:**	04/29/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 04/29/19

METALS

Project Name: 1827 FILLMORE AVENUE SITE
Lab Number: L1917177
Project Number: B0421-017-001
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-01
Client ID: MW-6-1 8-12 FT
Sample Location: 1827 FILLMORE AVE
Date Collected: 04/25/19 13:00
Date Received: 04/25/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 69%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	92.9		mg/kg	2.87	0.154	1	04/26/19 08:00	04/26/19 16:27	EPA 3050B	1,6010D	AB

Project Name: 1827 FILLMORE AVENUE SITE
Lab Number: L1917177
Project Number: B0421-017-001
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-02
Client ID: MW-6-2 8-12 FT
Sample Location: 1827 FILLMORE AVE
Date Collected: 04/25/19 13:30
Date Received: 04/25/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 50%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	1050		mg/kg	3.78	0.203	1	04/26/19 08:00	04/26/19 16:32	EPA 3050B	1,6010D	AB

Project Name: 1827 FILLMORE AVENUE SITE
Lab Number: L1917177
Project Number: B0421-017-001
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-03
Client ID: MW-6-3 8-12 FT
Sample Location: 1827 FILLMORE AVE
Date Collected: 04/25/19 14:00
Date Received: 04/25/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	113		mg/kg	2.56	0.137	1	04/26/19 08:00	04/26/19 16:36	EPA 3050B	1,6010D	AB

Project Name: 1827 FILLMORE AVENUE SITE
Lab Number: L1917177
Project Number: B0421-017-001
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-04
Client ID: MW-6-4 8-12 FT
Sample Location: 1827 FILLMORE AVE
Date Collected: 04/25/19 14:30
Date Received: 04/25/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	79.6		mg/kg	2.35	0.126	1	04/26/19 08:00	04/26/19 16:41	EPA 3050B	1,6010D	AB

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001
Lab Number: L1917177
Report Date: 04/29/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1230595-1										
Lead, Total	ND		mg/kg	2.00	0.107	1	04/26/19 08:00	04/26/19 15:08	1,6010D	AB

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVENUE SITE

Project Number: B0421-017-001

Lab Number: L1917177

Report Date: 04/29/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1230595-2 SRM Lot Number: D101-540								
Lead, Total	99		-		83-117	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001

Lab Number: L1917177
Report Date: 04/29/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1230595-3 QC Sample: L1917089-01 Client ID: MS Sample												
Lead, Total	3.72	46.1	49.4	99		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVENUE SITE

Project Number: B0421-017-001

Lab Number: L1917177

Report Date: 04/29/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1230595-4 QC Sample: L1917089-01 Client ID: DUP Sample						
Lead, Total	3.72	4.42	mg/kg	17		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001
Lab Number: L1917177
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-01
Client ID: MW-6-1 8-12 FT
Sample Location: 1827 FILLMORE AVE
Sample Depth:
Matrix: Soil
Date Collected: 04/25/19 13:00
Date Received: 04/25/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	68.6		%	0.100	NA	1	-	04/26/19 02:35	121,2540G	YA

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001
Lab Number: L1917177
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-02
Client ID: MW-6-2 8-12 FT
Sample Location: 1827 FILLMORE AVE
Sample Depth:
Matrix: Soil
Date Collected: 04/25/19 13:30
Date Received: 04/25/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	49.6		%	0.100	NA	1	-	04/26/19 02:35	121,2540G	YA

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001
Lab Number: L1917177
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-03
Client ID: MW-6-3 8-12 FT
Sample Location: 1827 FILLMORE AVE
Sample Depth:
Matrix: Soil
Date Collected: 04/25/19 14:00
Date Received: 04/25/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.3		%	0.100	NA	1	-	04/26/19 02:35	121,2540G	YA

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001
Lab Number: L1917177
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917177-04
Client ID: MW-6-4 8-12 FT
Sample Location: 1827 FILLMORE AVE
Sample Depth:
Matrix: Soil
Date Collected: 04/25/19 14:30
Date Received: 04/25/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.5		%	0.100	NA	1	-	04/26/19 02:35	121,2540G	YA

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVENUE SITE

Project Number: B0421-017-001

Lab Number: L1917177

Report Date: 04/29/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1230497-1 QC Sample: L1917133-01 Client ID: DUP Sample						
Solids, Total	90.3	89.8	%	1		20

Project Name: 1827 FILLMORE AVENUE SITE
Project Number: B0421-017-001

Lab Number: L1917177
Report Date: 04/29/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1917177-01A	Glass 60ml unpreserved split	A	NA		3.6	Y	Absent		PB-TI(180)
L1917177-01B	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		TS(7)
L1917177-02A	Glass 60ml unpreserved split	A	NA		3.6	Y	Absent		PB-TI(180)
L1917177-02B	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		TS(7)
L1917177-03A	Glass 60ml unpreserved split	A	NA		3.6	Y	Absent		PB-TI(180)
L1917177-03B	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		TS(7)
L1917177-04A	Glass 60ml unpreserved split	A	NA		3.6	Y	Absent		PB-TI(180)
L1917177-04B	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		TS(7)
L1917177-05A	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)
L1917177-06A	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)
L1917177-07A	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)
L1917177-08A	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)

*Values in parentheses indicate holding time in days

Project Name:	1827 FILLMORE AVENUE SITE	**Lab Number:**	L1917177
Project Number:	B0421-017-001	**Report Date:**	04/29/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVENUE SITE	**Lab Number:**	L1917177
Project Number:	B0421-017-001	**Report Date:**	04/29/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVENUE SITE	**Lab Number:**	L1917177
Project Number:	B0421-017-001	**Report Date:**	04/29/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 4/26/19

ALPHA Job #: L1917177

Client Information

Client: BENCHMARK ENV.
Address: 2558 HAMBURG TURNPIKE
BUFFALO, NY 14218
Phone: 716-856-0599
Fax:
Email: bmayback@turnkeyllc.com

Project Information

Project Name: 1827 FILLMORE AVENUE SITE
Project Location: 1827 FILLMORE AVE
Project # B0421-017-001
(Use Project name as Project #) ☐
Project Manager: BRYAN MAYBACK
ALPHAQuote #:

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 2

Deliverables

☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information

☒ Same as Client Info
PO #

Disposal Site Information

Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

CAT B

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TOTAL LEAD	Sample Specific Comments	Total Bottle
L1917701	MW-6-1 8-12 Ft	4/25/19	1300	Soil	CS	X		1
-02	MW-6-2 8-12 Ft		1330			X		1
-03	MW-6-3 8-12 Ft		1400			X		1
-04	MW-6-4 8-12 ft		1430			X		1
-05	MW6-5 8-12 Ft		1445			X	HOLD	1
-06	MW-6-6 8-12 Ft		1500			X	HOLD	1
-07	MW-6-7 8-12 Ft		1515			X	HOLD	1
-08	MW-6-8 8-12 Ft		1530			X	HOLD	1

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A								
Preservative	A								

Relinquished By:	Date/Time	Received By:	Date/Time
	4/25/19 1600		4/25/19 1600
	4/25/19 1600		4/26/19 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1917179
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Bryan Mayback
Phone:	(716) 856-0599
Project Name:	1827 FILLMORE AVE SITE
Project Number:	B0421-017-001
Report Date:	04/29/19

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 1827 FILLMORE AVE SITE
Project Number: B0421-017-001

Lab Number: L1917179
Report Date: 04/29/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1917179-01	PC OFFSITE A 6-10FT	SOIL	1827 FILLMORE AVE	04/25/19 10:00	04/25/19
L1917179-02	PC OFFSITE B 6-10FT	SOIL	1827 FILLMORE AVE	04/25/19 11:00	04/25/19

Project Name:	1827 FILLMORE AVE SITE	**Lab Number:**	L1917179
Project Number:	B0421-017-001	**Report Date:**	04/29/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	1827 FILLMORE AVE SITE	**Lab Number:**	L1917179
Project Number:	B0421-017-001	**Report Date:**	04/29/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 04/29/19

METALS

Project Name: 1827 FILLMORE AVE SITE
Lab Number: L1917179
Project Number: B0421-017-001
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917179-01
Client ID: PC OFFSITE A 6-10FT
Sample Location: 1827 FILLMORE AVE
Sample Depth:
Matrix: Soil

Date Collected: 04/25/19 10:00
Date Received: 04/25/19
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 04/26/19 05:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	04/27/19 17:27	04/29/19 10:49	EPA 3015	1,6010D	LC
Barium, TCLP	0.387	J	mg/l	0.500	0.021	1	04/27/19 17:27	04/29/19 10:49	EPA 3015	1,6010D	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/27/19 17:27	04/29/19 10:49	EPA 3015	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/27/19 17:27	04/29/19 10:49	EPA 3015	1,6010D	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	04/27/19 17:27	04/29/19 10:49	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/27/19 10:14	04/27/19 13:46	EPA 7470A	1,7470A	BV
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/27/19 17:27	04/29/19 10:49	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/27/19 17:27	04/29/19 10:49	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE AVE SITE
Lab Number: L1917179
Project Number: B0421-017-001
Report Date: 04/29/19

SAMPLE RESULTS

Lab ID: L1917179-02
Client ID: PC OFFSITE B 6-10FT
Sample Location: 1827 FILLMORE AVE
Sample Depth:
Matrix: Soil

Date Collected: 04/25/19 11:00
Date Received: 04/25/19
Field Prep: Not Specified
TCLP/SPLP Ext. Date: 04/26/19 05:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	04/27/19 17:27	04/29/19 10:54	EPA 3015	1,6010D	LC
Barium, TCLP	0.777		mg/l	0.500	0.021	1	04/27/19 17:27	04/29/19 10:54	EPA 3015	1,6010D	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/27/19 17:27	04/29/19 10:54	EPA 3015	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/27/19 17:27	04/29/19 10:54	EPA 3015	1,6010D	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	04/27/19 17:27	04/29/19 10:54	EPA 3015	1,6010D	LC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/27/19 10:14	04/27/19 13:48	EPA 7470A	1,7470A	BV
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/27/19 17:27	04/29/19 10:54	EPA 3015	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/27/19 17:27	04/29/19 10:54	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE AVE SITE
Project Number: B0421-017-001
Lab Number: L1917179
Report Date: 04/29/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-02 Batch: WG1231057-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/27/19 10:14	04/27/19 13:37	1,7470A	BV

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 04/25/19 15:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-02 Batch: WG1231168-1										
Arsenic, TCLP	ND		mg/l	1.00	0.019	1	04/27/19 17:27	04/29/19 10:16	1,6010D	LC
Barium, TCLP	ND		mg/l	0.500	0.021	1	04/27/19 17:27	04/29/19 10:16	1,6010D	LC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/27/19 17:27	04/29/19 10:16	1,6010D	LC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/27/19 17:27	04/29/19 10:16	1,6010D	LC
Lead, TCLP	ND		mg/l	0.500	0.027	1	04/27/19 17:27	04/29/19 10:16	1,6010D	LC
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/27/19 17:27	04/29/19 10:16	1,6010D	LC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/27/19 17:27	04/29/19 10:16	1,6010D	LC

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 04/25/19 15:54

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE SITE

Project Number: B0421-017-001

Lab Number: L1917179

Report Date: 04/29/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1231057-2								
Mercury, TCLP	107		-		80-120	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 Batch: WG1231168-2								
Arsenic, TCLP	106		-		75-125	-		20
Barium, TCLP	101		-		75-125	-		20
Cadmium, TCLP	98		-		75-125	-		20
Chromium, TCLP	98		-		75-125	-		20
Lead, TCLP	99		-		75-125	-		20
Selenium, TCLP	108		-		75-125	-		20
Silver, TCLP	96		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE SITE
Project Number: B0421-017-001

Lab Number: L1917179
Report Date: 04/29/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1231057-3 QC Sample: L1917178-01 Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0258	103		-	-		80-120	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1231168-3 QC Sample: L1916671-07 Client ID: MS Sample												
Arsenic, TCLP	0.020J	1.2	1.32	110		-	-		75-125	-		20
Barium, TCLP	0.632	20	22.4	109		-	-		75-125	-		20
Cadmium, TCLP	ND	0.51	0.542	106		-	-		75-125	-		20
Chromium, TCLP	ND	2	2.14	107		-	-		75-125	-		20
Lead, TCLP	1.55	5.1	6.78	102		-	-		75-125	-		20
Selenium, TCLP	ND	1.2	1.36	113		-	-		75-125	-		20
Silver, TCLP	ND	0.5	0.528	106		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE SITE

Project Number: B0421-017-001

Lab Number: L1917179

Report Date: 04/29/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1231057-4 QC Sample: L1917178-01 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1231168-4 QC Sample: L1916671-07 Client ID: DUP Sample						
Lead, TCLP	1.55	1.54	mg/l	1		20

Project Name: 1827 FILLMORE AVE SITE
Project Number: B0421-017-001

Lab Number: L1917179
Report Date: 04/29/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1917179-01A	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		-
L1917179-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1917179-01X9	Tumble Vessel	A	NA		3.6	Y	Absent		-
L1917179-02A	Glass 120ml/4oz unpreserved	A	NA		3.6	Y	Absent		-
L1917179-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.6	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1917179-02X9	Tumble Vessel	A	NA		3.6	Y	Absent		-

*Values in parentheses indicate holding time in days

Project Name:	1827 FILLMORE AVE SITE	**Lab Number:**	L1917179
Project Number:	B0421-017-001	**Report Date:**	04/29/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE SITE	**Lab Number:**	L1917179
Project Number:	B0421-017-001	**Report Date:**	04/29/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE SITE	**Lab Number:**	L1917179
Project Number:	B0421-017-001	**Report Date:**	04/29/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 4/26/19

ALPHA Job #: L1917109

Client Information
Client: BENCHMARK
Address: 2558 HAMBURG TURNPIKE
BUFFALO, NY 14218
Phone: 716-856-0599
Fax:
Email: bmayback@trunkeyllc.com

Project Information
Project Name: 827 FILLMORE AVE SITE
Project Location: 827 FILLMORE
Project # B0421-017-021
(Use Project name as Project #) ☐
Project Manager: BRYAN MAYBACK
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 2

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TCLP METALS	Sample Specific Comments	Total Bottle
17179-01	PC OFFSITE A 6-10 ft	4/25/19	1000	SOIL	CS	X		1
-02	PC OFFSITE B 6-10 ft	4/25/19	1100	SOIL	CS	X		1

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A							
Preservative	A							

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	4/25/19 1600	[signature] PATL	4/25/19 1600
[signature] PATL	4/25/19 1600	[signature]	4/25/19 0100

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1911328
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Mike Lesakowski
Phone:	(716) 856-0599
Project Name:	1827 FILLMORE
Project Number:	0421-017-001
Report Date:	03/26/19

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1911328-01	SB-21-9 (12-16)	SOIL	BUFFALO, NY	03/21/19 09:30	03/21/19
L1911328-02	SB-21-10 (12-16)	SOIL	BUFFALO, NY	03/21/19 10:22	03/21/19
L1911328-03	SB-21-11 (12-16)	SOIL	BUFFALO, NY	03/21/19 11:30	03/21/19
L1911328-04	SB-21-12 (12-16)	SOIL	BUFFALO, NY	03/21/19 12:41	03/21/19
L1911328-05	SB-21-13 (12-16)	SOIL	BUFFALO, NY	03/21/19 13:36	03/21/19

Project Name:	1827 FILLMORE	**Lab Number:**	L1911328
Project Number:	0421-017-001	**Report Date:**	03/26/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	1827 FILLMORE	**Lab Number:**	L1911328
Project Number:	0421-017-001	**Report Date:**	03/26/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Total Metals

The WG1218691-3 MS recovery for lead (698%), performed on L1911328-01, does not apply because the sample concentration is greater than four times the spike amount added.

The WG1218691-4 Laboratory Duplicate RPD for lead (45%), performed on L1911328-01, is outside the acceptance criteria. The elevated RPD has been attributed to the non-homogeneous nature of the native sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Amita Naik

Title: Technical Director/Representative Date: 03/26/19

METALS

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-01
Client ID: SB-21-9 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 09:30
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 73%
TCLP/SPLP Ext. Date: 03/21/19 18:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	2.88		mg/l	0.500	0.027	1	03/26/19 04:25	03/26/19 11:53	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-01
Client ID: SB-21-9 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 09:30
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	300		mg/kg	2.63	0.141	1	03/22/19 19:20	03/23/19 00:32	EPA 3050B	1,6010D	MC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-02
Client ID: SB-21-10 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 10:22
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 62%
TCLP/SPLP Ext. Date: 03/22/19 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	22.7		mg/l	0.500	0.027	1	03/26/19 04:25	03/26/19 11:49	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-02
Client ID: SB-21-10 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 10:22
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 62%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	1180		mg/kg	3.20	0.172	1	03/22/19 19:20	03/23/19 02:35	EPA 3050B	1,6010D	MC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-03
Client ID: SB-21-11 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 11:30
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 66%
TCLP/SPLP Ext. Date: 03/21/19 18:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.209	J	mg/l	0.500	0.027	1	03/26/19 04:25	03/26/19 11:58	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-03
Client ID: SB-21-11 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 11:30
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 66%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	556		mg/kg	2.93	0.157	1	03/22/19 19:20	03/23/19 02:40	EPA 3050B	1,6010D	MC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-04
Client ID: SB-21-12 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 12:41
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 72%
TCLP/SPLP Ext. Date: 03/21/19 18:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.029	J	mg/l	0.500	0.027	1	03/26/19 04:25	03/26/19 12:02	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-04
Client ID: SB-21-12 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 12:41
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 72%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	258		mg/kg	2.76	0.148	1	03/22/19 19:20	03/23/19 02:44	EPA 3050B	1,6010D	MC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-05
Client ID: SB-21-13 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 13:36
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 83%
TCLP/SPLP Ext. Date: 03/21/19 18:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.057	J	mg/l	0.500	0.027	1	03/26/19 04:25	03/26/19 12:21	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE
Lab Number: L1911328
Project Number: 0421-017-001
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-05
Client ID: SB-21-13 (12-16)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 13:36
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	39.5		mg/kg	2.28	0.122	1	03/22/19 19:20	03/23/19 02:49	EPA 3050B	1,6010D	MC

Project Name: 1827 FILLMORE
Project Number: 0421-017-001
Lab Number: L1911328
Report Date: 03/26/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-05 Batch: WG1218691-1										
Lead, Total	ND		mg/kg	2.00	0.107	1	03/22/19 19:20	03/23/19 00:23	1,6010D	MC

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 02 Batch: WG1219449-1										
Lead, TCLP	ND		mg/l	0.500	0.027	1	03/26/19 04:25	03/26/19 11:44	1,6010D	LC

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 03/22/19 19:29

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01,03-05 Batch: WG1219450-1										
Lead, TCLP	ND		mg/l	0.500	0.027	1	03/26/19 04:25	03/26/19 11:26	1,6010D	LC

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 03/21/19 18:23

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE

Project Number: 0421-017-001

Lab Number: L1911328

Report Date: 03/26/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-05 Batch: WG1218691-2 SRM Lot Number: D101-540								
Lead, Total	108		-		83-117	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 Batch: WG1219449-2								
Lead, TCLP	91		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,03-05 Batch: WG1219450-2								
Lead, TCLP	96		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1218691-3 QC Sample: L1911328-01 Client ID: SB-21-9 (12-16)												
Lead, Total	300	54.2	678	**698**	Q	-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1219449-3 QC Sample: L1911328-02 Client ID: SB-21-10 (12-16)												
Lead, TCLP	22.7	5.1	27.2	88		-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,03-05 QC Batch ID: WG1219450-3 QC Sample: L1909379-08 Client ID: MS Sample												
Lead, TCLP	1.46	5.1	6.06	90		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-05 QC Batch ID: WG1218691-4 QC Sample: L1911328-01 Client ID: SB-21-9 (12-16)						
Lead, Total	300	473	mg/kg	**45**	Q	20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1219449-4 QC Sample: L1911328-02 Client ID: SB-21-10 (12-16)						
Lead, TCLP	22.7	23.2	mg/l	2		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01,03-05 QC Batch ID: WG1219450-4 QC Sample: L1909379-08 Client ID: DUP Sample						
Lead, TCLP	1.46	1.47	mg/l	1		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-01
Client ID: SB-21-9 (12-16)
Sample Location: BUFFALO, NY

Date Collected: 03/21/19 09:30
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.8		%	0.100	NA	1	-	03/22/19 11:10	121,2540G	RI

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-02
Client ID: SB-21-10 (12-16)
Sample Location: BUFFALO, NY

Date Collected: 03/21/19 10:22
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	61.8		%	0.100	NA	1	-	03/22/19 11:10	121,2540G	RI

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-03
Client ID: SB-21-11 (12-16)
Sample Location: BUFFALO, NY

Date Collected: 03/21/19 11:30
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	65.5		%	0.100	NA	1	-	03/22/19 11:10	121,2540G	RI

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-04
Client ID: SB-21-12 (12-16)
Sample Location: BUFFALO, NY

Date Collected: 03/21/19 12:41
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	71.6		%	0.100	NA	1	-	03/22/19 11:10	121,2540G	RI

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

SAMPLE RESULTS

Lab ID: L1911328-05
Client ID: SB-21-13 (12-16)
Sample Location: BUFFALO, NY

Date Collected: 03/21/19 13:36
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.8		%	0.100	NA	1	-	03/22/19 11:10	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE

Project Number: 0421-017-001

Lab Number: L1911328

Report Date: 03/26/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1218503-1 QC Sample: L1911300-01 Client ID: DUP Sample						
Solids, Total	82.6	80.7	%	2		20

Project Name: 1827 FILLMORE
Project Number: 0421-017-001

Lab Number: L1911328
Report Date: 03/26/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1911328-01A	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		PB-TI(180)
L1911328-01B	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		TS(7)
L1911328-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.6	Y	Absent		PB-CI(180)
L1911328-01X9	Tumble Vessel	A	NA		2.6	Y	Absent		-
L1911328-02A	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		PB-TI(180)
L1911328-02B	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		TS(7)
L1911328-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.6	Y	Absent		PB-CI(180)
L1911328-02X9	Tumble Vessel	A	NA		2.6	Y	Absent		-
L1911328-03A	Glass 120ml/4oz unpreserved	A	NA		2.6	Y	Absent		PB-TI(180)
L1911328-03B	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		TS(7)
L1911328-03X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.6	Y	Absent		PB-CI(180)
L1911328-03X9	Tumble Vessel	A	NA		2.6	Y	Absent		-
L1911328-04A	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		PB-TI(180)
L1911328-04B	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		TS(7)
L1911328-04X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.6	Y	Absent		PB-CI(180)
L1911328-04X9	Tumble Vessel	A	NA		2.6	Y	Absent		-
L1911328-05A	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		PB-TI(180)
L1911328-05B	Vial Large Septa unpreserved (4oz)	A	NA		2.6	Y	Absent		TS(7)
L1911328-05X	Plastic 120ml HNO3 preserved Extracts	A	NA		2.6	Y	Absent		PB-CI(180)
L1911328-05X9	Tumble Vessel	A	NA		2.6	Y	Absent		-

*Values in parentheses indicate holding time in days

Project Name:	1827 FILLMORE	**Lab Number:**	L1911328
Project Number:	0421-017-001	**Report Date:**	03/26/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the

Report Format: DU Report with 'J' Qualifiers

original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name:	1827 FILLMORE	**Lab Number:**	L1911328
Project Number:	0421-017-001	**Report Date:**	03/26/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 3/22/19

ALPHA Job #: L4911328

Client Information
Client: Benchmark Eng
Address: 2558 Hamburg Turnpike Lackawanna NY 14218
Phone: (716) 828-8358
Fax:
Email: TBeland@CTmail.com

Project Information
Project Name: 1827 Fillmore
Project Location: Buffalo NY
Project # 0421-017-001
(Use Project name as Project #) ☒
Project Manager: Mike Lesalewski
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☒ # of Days: 3 DAY

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
CAT B

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	T. Pb	TCLP Pb	Total Bottle
11328-01	SB-21-9 (12-16)	3/21/19	930	Soil	TAB	X	X	2
-02	SB-21-10 (12-16)	"	1022	"	"	X	X	2
-03	SB-21-11 (12-16)	"	1130	"	"	X	X	2
-04	SB-21-12 (12-16)	"	1241	"	"	X	X	2
-05	SB-21-13 (12-16)	"	1336	"	"	X	X	2

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

Sample Specific Comments

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type	A	A
Preservative	A	A

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	3/21/19 1606	Audrey Tilley AAL	3/21/19 16:00
Audrey Tilley AAL	3/21/19 16:30	[signature]	3/22/19 0040

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L1911333
Client:	Benchmark & Turnkey Companies 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Mike Lesakowski
Phone:	(716) 856-0599
Project Name:	1827 FILLMORE AVE.
Project Number:	0421-017-001
Report Date:	03/28/19

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 1827 FILLMORE AVE.
Project Number: 0421-017-001

Lab Number: L1911333
Report Date: 03/28/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1911333-01	SB-21-9 (16-18)	SOIL	BUFFALO, NY	03/21/19 09:40	03/21/19
L1911333-02	SB-21-10 (16-19.5)	SOIL	BUFFALO, NY	03/21/19 10:36	03/21/19
L1911333-03	SB-21-11 (16-18.3)	SOIL	BUFFALO, NY	03/21/19 11:35	03/21/19
L1911333-04	SB-21-12 (16-18.5)	SOIL	BUFFALO, NY	03/21/19 12:55	03/21/19
L1911333-05	SB-21-13 (16-18)	SOIL	BUFFALO, NY	03/21/19 13:46	03/21/19

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1911333
Project Number:	0421-017-001	**Report Date:**	03/28/19

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1911333
Project Number:	0421-017-001	**Report Date:**	03/28/19

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The analyses performed were specified by the client.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Amita Naik

Title: Technical Director/Representative Date: 03/28/19

METALS

Project Name: 1827 FILLMORE AVE.
Lab Number: L1911333
Project Number: 0421-017-001
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1911333-02
Client ID: SB-21-10 (16-19.5)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 10:36
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 71%
TCLP/SPLP Ext. Date: 03/27/19 06:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Lead, TCLP	0.540		mg/l	0.500	0.027	1	03/28/19 07:35	03/28/19 11:27	EPA 3015	1,6010D	LC

Project Name: 1827 FILLMORE AVE.
Lab Number: L1911333
Project Number: 0421-017-001
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1911333-02
Client ID: SB-21-10 (16-19.5)
Sample Location: BUFFALO, NY
Date Collected: 03/21/19 10:36
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Lead, Total	1650		mg/kg	2.71	0.145	1	03/27/19 22:50	03/28/19 10:27	EPA 3050B	1,6010D	LC

Project Name: 1827 FILLMORE AVE.
Project Number: 0421-017-001
Lab Number: L1911333
Report Date: 03/28/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02 Batch: WG1220364-1										
Lead, Total	ND		mg/kg	2.00	0.107	1	03/27/19 22:50	03/28/19 09:52	1,6010D	LC

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 02 Batch: WG1220456-1										
Lead, TCLP	ND		mg/l	0.500	0.027	1	03/28/19 07:35	03/28/19 10:55	1,6010D	LC

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 03/26/19 04:36

Lab Control Sample Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: 0421-017-001

Lab Number: L1911333

Report Date: 03/28/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1220364-2 SRM Lot Number: D101-540								
Lead, Total	102		-		83-117	-		
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 Batch: WG1220456-2								
Lead, TCLP	97		-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 1827 FILLMORE AVE.
Project Number: 0421-017-001

Lab Number: L1911333
Report Date: 03/28/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1220364-3 QC Sample: L1911708-01 Client ID: MS Sample												
Lead, Total	703	62.1	697	**0**	Q	-	-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1220456-3 QC Sample: L1911879-01 Client ID: MS Sample												
Lead, TCLP	3.24	5.1	8.04	94		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: 0421-017-001

Lab Number: L1911333

Report Date: 03/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1220364-4 QC Sample: L1911708-01 Client ID: DUP Sample						
Lead, Total	703	660	mg/kg	6		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1220456-4 QC Sample: L1911879-01 Client ID: DUP Sample						
Lead, TCLP	3.24	3.27	mg/l	1		20

INORGANICS
&
MISCELLANEOUS

Project Name: 1827 FILLMORE AVE.
Project Number: 0421-017-001

Lab Number: L1911333
Report Date: 03/28/19

SAMPLE RESULTS

Lab ID: L1911333-02
Client ID: SB-21-10 (16-19.5)
Sample Location: BUFFALO, NY

Date Collected: 03/21/19 10:36
Date Received: 03/21/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	71.3		%	0.100	NA	1	-	03/26/19 21:08	121,2540G	YA

Lab Duplicate Analysis

Batch Quality Control

Project Name: 1827 FILLMORE AVE.

Project Number: 0421-017-001

Lab Number: L1911333

Report Date: 03/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1219864-1 QC Sample: L1910551-14 Client ID: DUP Sample						
Solids, Total	96.1	96.4	%	0		20

Project Name: 1827 FILLMORE AVE.
Project Number: 0421-017-001

Lab Number: L1911333
Report Date: 03/28/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1911333-01A	Glass 250ml/8oz unpreserved	A	NA		4.1	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)
L1911333-02A	Glass 250ml/8oz unpreserved	A	NA		4.1	Y	Absent		TS(7),PB-TI(180)
L1911333-02X	Plastic 120ml HNO3 preserved Extracts	NA	NA			Y	Absent		PB-CI(180)
L1911333-03A	Glass 250ml/8oz unpreserved	A	NA		4.1	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)
L1911333-04A	Glass 250ml/8oz unpreserved	A	NA		4.1	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)
L1911333-05A	Glass 250ml/8oz unpreserved	A	NA		4.1	Y	Absent		HOLD-WETCHEM(),HOLD-METAL(180)

*Values in parentheses indicate holding time in days

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1911333
Project Number:	0421-017-001	**Report Date:**	03/28/19

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1911333
Project Number:	0421-017-001	**Report Date:**	03/28/19

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers

Project Name:	1827 FILLMORE AVE.	**Lab Number:**	L1911333
Project Number:	0421-017-001	**Report Date:**	03/28/19

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 3/22/19

ALPHA Job #: L1911333

Client Information
Client: Benchmark Eng
Address: 2558 Hamburg Turnpike Suite 300
Buffalo NY 14218
Phone: (716) 856-0599
Fax:
Email: TBehrendt@benchmarkeng.com

Project Information
Project Name: 1827 Fillmore Ave
Project Location: Buffalo, NY
Project # 0421-017-001
(Use Project name as Project #) ☑
Project Manager: Mike Lesakowski
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Hold until requested for Release

Please specify Metals or TAL.

ANALYSIS
Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TPH	TAL Pb	Sample Specific Comments	Total Bottles
11333-01	SB-21-9 (16-18)	3/21/19	940	Soil	TAB	X	X	Hold	1
-02	SB-21-10 (16-19.5)		1036			X	X	Hold	1
-03	SB-21-11 (16-18.3)		1135			X	X	Hold	1
-04	SB-21-12 (16-18.5)		1255			X	X	Hold	1
-05	SB-21-13 (16-18)		1346			X	X	Hold	1

Container Type: A A
Preservative: A A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
	3/21/19	Audrey Liley AAL	3/21/19 16:05
Audrey Liley AAL	3/21/19 16:30		3/22/19 0040

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

APPENDIX D

MASTER EROSION CONTROL PLAN

MASTER EROSION CONTROL PLAN

1827 FILLMORE AVENUE SITE
BCP SITE NO. C915279
BUFFALO, NEW YORK

March 2019 0421-017-001

Prepared for:
1827 Fillmore LLC

Prepared By:

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0599

In Association With:

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

TABLE OF CONTENTS

LIST OF ATTACHMENTS

1.0 INTRODUCTION

1.1 Background

The BCP property, located at 1827 Fillmore Avenue (Tax ID No. 90.13-1-11) is situated in a residential, commercial and industrial zoned area of the City of Buffalo, Erie County, New York and consists of one parcel measuring approximately 17.15-acres. The Site is currently vacant with green areas, asphalt paved areas, former roadways and former building areas from the Kensington Heights Apartments.

From at least 1917 the Site was utilized as a stone quarry. Sometime between the 1940s and 1950s, prior to development of the Kensington Heights Towers in 1958, the stone quarry was backfilled with unknown fill materials. The Kensington Heights apartments were built as low-income housing, formally as a federal/state development. The Site was improved with six (6), seven-story brick apartment buildings with approximately 67 units per building, open space, and on-Site parking. The Site has been vacant since the 1980s. From 2009 to 2014 asbestos abatement and demolition of five (5) of the six (6) buildings were demolished. The sixth building was recently demolished in October 2018.

1.2 Purpose and Scope

This Master Erosion Control Plan (MECP) was prepared to provide guidance during remedial action activities since erosion control will be a critical component of preventing the potential migration of contaminants off-site during excavation activities.

2.0 POTENTIAL EROSION AND SEDIMENT CONTROL CONCERNS

Potential areas and items of concern during remedial action activities may include the following:

- Remediated areas or off-site properties adjacent to unremediated parcels need protection so they do not become impacted by Site operations.
- Runoff from soil stockpiles, if any, will require erosion controls.
- Surface slopes need to be minimized as much as practical to control sediment transfer.
- Soil/fill excavated will require proper handling and disposal.

3.0 EROSION AND SEDIMENT CONTROL MEASURES

3.1 Background

Standard soil conservation practices need to be incorporated into remedial activities to mitigate soil erosion damage, off-site sediment migration, and water pollution from erosion. These practices combine vegetative and structural measures, many of which will be permanent in nature and become part of the completed project (i.e., grading). Other measures will be temporary and serve only during the construction stage. Selected erosion and sediment control measures will meet the following criteria:

- Incorporate temporary and permanent erosion control measures.
- Remove sediment from sediment-laden storm water before it leaves the Site.

3.2 Temporary Measures

Temporary erosion and sedimentation control measures and facilities will be used during construction. These temporary measures will be installed and maintained until they are either no longer needed or until such time as permanent measures are installed and become effective. Erosion and sediment controls shall be installed in accordance with the standards and specifications presented in Attachment D-1. At a minimum, the following temporary measures will be used:

- Silt fencing, tubular silt socks
- Cautious placement, compaction and grading of stockpiles

3.2.1 Silt Fencing

Remedial activities may result in surface water flow to drainage ditches and adjacent properties. Silt fencing or tubular silt socks will be the primary sediment control measure used in these areas. Prior to extensive soil excavation or grading activities, silt fences or silt socks will be installed along the perimeter of all construction areas. The orientation of the fencing will be adjusted as necessary as the work proceeds to accommodate changing site conditions.

If necessary, intermediate fencing/socks will be used upgradient of the perimeter fencing/socks to help lower surface water runoff velocities and reduce the volume of sediment to perimeter fencing/socks. Stockpiles will also be surrounded with silt fencing/socks.

As sediment collects, the silt fences/socks will be cleaned as necessary to maintain their integrity. Removed sediment will be used elsewhere on-site as general fill. All perimeter silt fences/socks will remain in place until construction activities in an area are completed and vegetative cover has been established.

3.2.2 Cautious Placement of Stockpiles

Excavation activities may produce stockpiles of soil and subgrade soil/fill materials. Careful placement and construction of stockpiles will be required to control erosion. Stockpiles will be placed no closer than 50 feet from storm water inlets and parcel boundaries. Additionally, stockpiles will be graded and compacted as necessary for positive surface water runoff and dust control.

3.3 Permanent Control Measures during Site Redevelopment

Permanent erosion and sedimentation control measures and structures will be installed as soon as practical during construction for long-term erosion protection. Examples of permanent erosion control measures could include:

- Minimizing the potential contact with, and migration of, subsurface soil/fill through the placement of a "clean" slag cover system in all areas not covered with structures, roads, parking areas, sidewalks, etc.
- Planting and maintaining vegetation.
- Limiting runoff flow velocities to the extent practical.

4.0 CONSTRUCTION MANAGEMENT PRACTICES

4.1 General

The following general construction practices should be evaluated for erosion and sedimentation control purposes during remedial activities:

- Clearing and grading only as much area as is necessary to accommodate the construction needs to minimize disturbance of areas subject to erosion (i.e., phasing the work).
- Covering exposed or disturbed areas of the Site as quickly as practical.
- Installing erosion and sediment control measures before disturbing the Site subgrade.
- Minimizing both on-site and off-site tracking of soil by vehicles by using routine entry/exit routes.

4.2 Monitoring, Inspection and Maintenance

All erosion and sedimentation controls described in this Plan will be inspected by a qualified representative of the Site Owner within 24 hours of a heavy rainfall event (defined as more than 0.5 inches of precipitation in a 24-hour period) and repaired or modified as necessary to effectively control erosion or turbidity problems. Inspections should include areas under construction, stockpile areas, erosion control devices (i.e., silt fences, silt socks, storm drain inlet protection, etc.) and locations where vehicles enter and leave the site. Routine inspections of the entire Site should also be made on a weekly basis during development.

If inspections indicate problems, corrective measures should be implemented within 24 hours. A report summarizing the scope of the inspection, name of the inspector, date, observations made, and a description of the corrective actions taken should be completed. Attachment D-2 includes the Inspection and Maintenance Report Form.

4.2.1 Implementation

Erosion controls and features shall, at all times, be properly constructed, operated, and maintained in accordance with regulatory requirements and good engineering and construction practices. Erosion control measures and activities will be conducted in accordance with currently accepted Best Management Practices (BMPs).

Erosion control monitoring, inspection, and maintenance are an integral part of Site storm water and erosion control. The key elements of the monitoring effort include the following:

- Site inspections and maintenance
- BMPs monitoring
- Recordkeeping
- Review and modifications
- Certification of compliance

4.2.2 Site Inspections and Maintenance Practices

The temporary erosion control features will be maintained until no longer needed or permanent erosion control methods are installed. Site inspections are required every seven days or within 24 hours of a rainfall of 0.5 inches or greater. All disturbed areas, areas for material storage, locations where vehicles enter or exit the site, and all of the erosion and sediment controls identified as part of this Plan must be inspected. Controls must be in good operating condition until the affected area they protect has been completely stabilized and the construction activity is complete. If a repair is necessary, it must be completed within seven days of receipt of a report or notice, if practical. Inspection for specific erosion and sediment controls will include the following:

- Silt fence/silt socks will be inspected to determine the following:
  1) Depth
  2) Condition of fabric
  3) That the fabric is attached to the posts
  4) That the fence posts are firmly in the ground
- The silt fences/silt socks will be inspected weekly and within 24 hours of a 0.5 inch or greater storm event.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and other potential erosion control problems.
- The Contractor shall designate individual(s) that will be responsible for erosion control, maintenance, and repair activities. The designated individual will also be responsible for inspecting the site and filling out the inspection and maintenance report.

- Personnel selected for inspection and maintenance responsibilities will receive training as directed by the Engineer. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used on-site in good working order.

The individual inspecting the Site must record any damages or deficiencies on the Inspection and Maintenance Report Form in Attachment D-2. This form can be used to request maintenance and repair and to document inspection and maintenance activities. Damages or deficiencies must be corrected as soon as possible after the inspection. Any changes that may be required to correct deficiencies in this Plan should also be made as soon as possible, but in no case later than seven days after the inspection.

4.2.3 Recordkeeping

A copy of the MECP and inspection and maintenance records must be kept at the Site from the time construction activities begins until the Site is stabilized. These documents will be made available upon request to regulatory agency representatives or members of the public.

4.2.4 Modifications to the Storm Water Management and Erosion Control Plan

During the course of construction, unanticipated changes may occur that affect this MECP such as schedule changes, phasing changes, staging area modifications, off-site drainage impacts, and repeated failures of designed controls. Any changes to the activities and controls identified in this Plan must be documented and the Plan revised accordingly. Certification of revisions to this plan shall be included at the end of the document.

ATTACHMENT D-1

EROSION CONTROL DETAILS

FINAL

New York State Standards and Specifications for Erosion and Sediment Control

November 2016

NEW YORK STATE OF OPPORTUNITY
Department of Environmental Conservation

STANDARD AND SPECIFICATIONS FOR SILT FENCE

Definition & Scope

A **temporary** barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope length and fence length will not exceed the limits shown in the Design Criteria for the specific type of silt fence used ; and
2. Maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier; and
5. Soil conditions allow for proper keying of fabric, or other anchorage, to prevent blowouts.

Design Criteria

1. Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff.
2. All silt fences shall be placed as close to the disturbed area as possible, but at least 10 feet from the toe of a slope steeper than 3H:1V, to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.
3. The type of silt fence specified for each location on the plan shall not exceed the maximum slope length and maximum fence length requirements shown in the following table:

		Slope Length/Fence Length (ft.)		
Slope	Steepness	Standard	Reinforced	Super
<2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 to 10:1	125/1000	250/2000	300/2500
10-20%	10:1 to 5:1	100/750	150/1000	200/1000
20-33%	5:1 to 3:1	60/500	80/750	100/1000
33-50%	3:1 to 2:1	40/250	70/350	100/500
>50%	> 2:1	20/125	30/175	50/250

Standard Silt Fence (SF) is fabric rolls stapled to wooden stakes driven 16 inches in the ground.
Reinforced Silt Fence (RSF) is fabric placed against welded wire fabric with anchored steel posts driven 16 inches in the ground.
Super Silt Fence (SSF) is fabric placed against chain link fence as support backing with posts driven 3 feet in the ground.

4. Silt fence shall be removed as soon as the disturbed area has achieved final stabilization.

The silt fence shall be installed in accordance with the appropriate details. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. Butt joints are not acceptable. A detail of the silt fence shall be shown on the plan. See Figure 5.30 on page 5.56 for Reinforced Silt Fence as an example of details to be provided.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	110	ASTM D 4632
Elongation at Failure (%)	20	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/ min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751
Minimum UV Residual (%)	70	ASTM D 4355

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.5 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot. Posts for super silt fence shall be standard chain link fence posts.

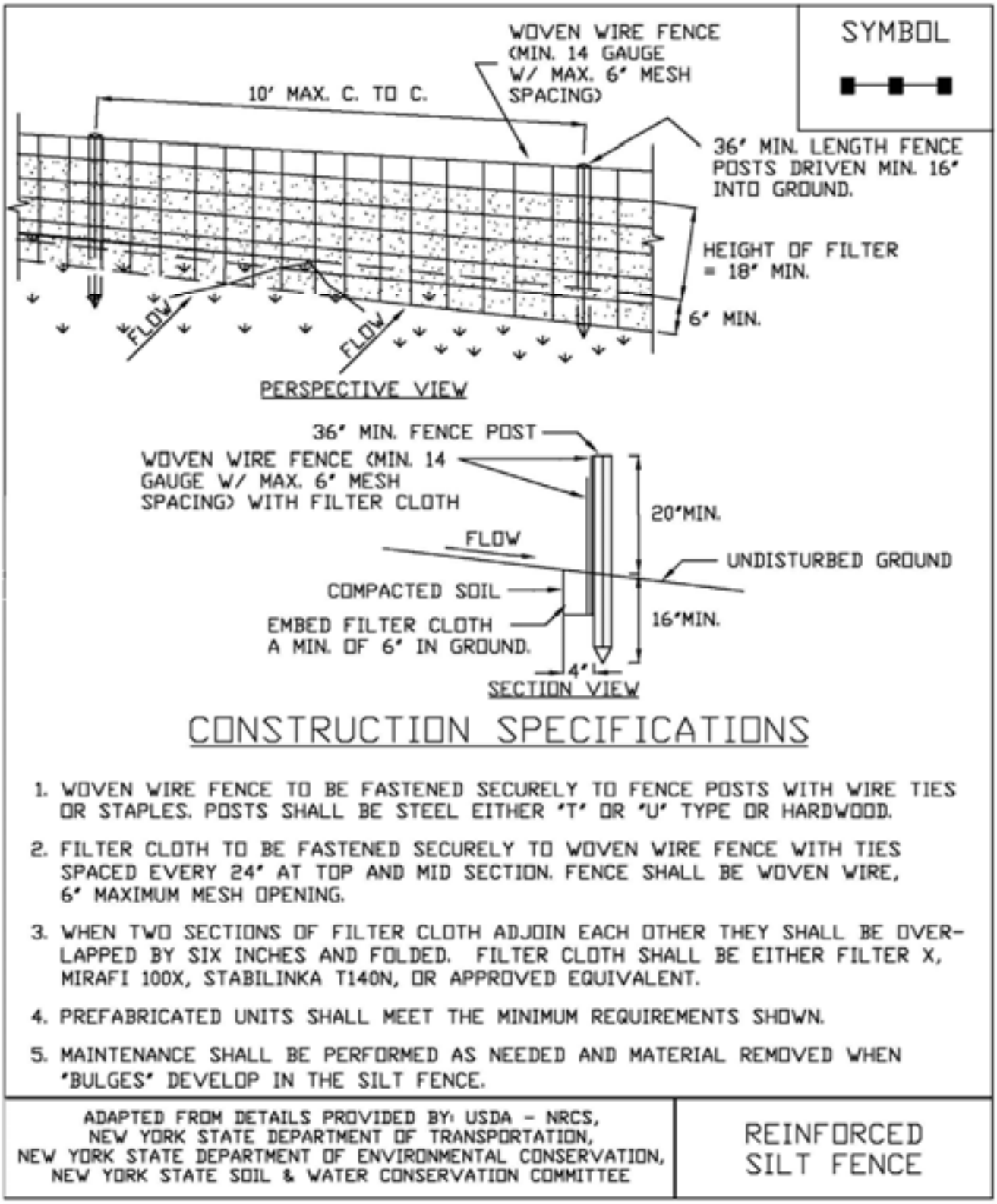
3. Wire Fence for reinforced silt fence: Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated silt fence is acceptable as long as all material specifications are met.

Super Silt Fence

Reinforced Silt Fence

Figure 5.30
Reinforced Silt Fence



STANDARD AND SPECIFICATIONS FOR COMPOST FILTER SOCK

Definition & Scope

A **temporary** sediment control practice composed of a degradable geotextile mesh tube filled with compost filter media to filter sediment and other pollutants associated with construction activity to prevent their migration offsite.

Condition Where Practice Applies

Compost filter socks can be used in many construction site applications where erosion will occur in the form of sheet erosion and there is no concentration of water flowing to the sock. In areas with steep slopes and/or rocky terrain, soil conditions must be such that good continuous contact between the sock and the soil is maintained throughout its length. For use on impervious surfaces such as road pavement or parking areas, proper anchorage must be provided to prevent shifting of the sock or separation of the contact between the sock and the pavement. Compost filter socks are utilized both at the site perimeter as well as within the construction areas. These socks may be filled after placement by blowing compost into the tube pneumatically, or filled at a staging location and moved into its designed location.

Design Criteria

1. Compost filter socks will be placed on the contour with both terminal ends of the sock extended 8 feet upslope at a 45 degree angle to prevent bypass flow.

2. Diameters designed for use shall be 12" – 32" except that 8" diameter socks may be used for residential lots to control areas less than 0.25 acres.

3. The flat dimension of the sock shall be at least 1.5 times the nominal diameter.

4. The **Maximum Slope Length** (in feet) above a compost filter sock shall not exceed the following limits:

Dia. (in.)	Slope %						
	2	**5**	**10**	**20**	**25**	**33**	**50**
8	225*	200	100	50	20	—	—
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50
* Length in feet							

5. The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids compost produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Solid Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metals content. When using compost filter socks adjacent to surface water, the compost should have a low nutrient value.**

6. The compost filter sock fabric material shall meet the

7. Compost filter socks shall be anchored in earth with 2" x 2" wooden stakes driven 12" into the soil on 10 foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock.

8. All specific construction details and material specifications shall appear on the erosion and sediment control constructions drawings when compost filter socks are included in the plan.

Maintenance

1. Traffic shall not be permitted to cross filter socks.

2. Accumulated sediment shall be removed when it reaches half the above ground height of the sock and disposed of in accordance with the plan.

3. Socks shall be inspected weekly and after each runoff event. Damaged socks shall be repaired in the manner required by the manufacturer or replaced within 24 hours of inspection notification.

4. Biodegradable filter socks shall be replaced after 6 months; photodegradable filter socks after 1 year. Polypropylene socks shall be replaced according to the manufacturer's recommendations.

5. Upon stabilization of the area contributory to the sock, stakes shall be removed. The sock may be left in place and vegetated or removed in accordance with the stabilization plan. For removal the mesh can be cut and the compost spread as an additional mulch to act as a soil supplement.

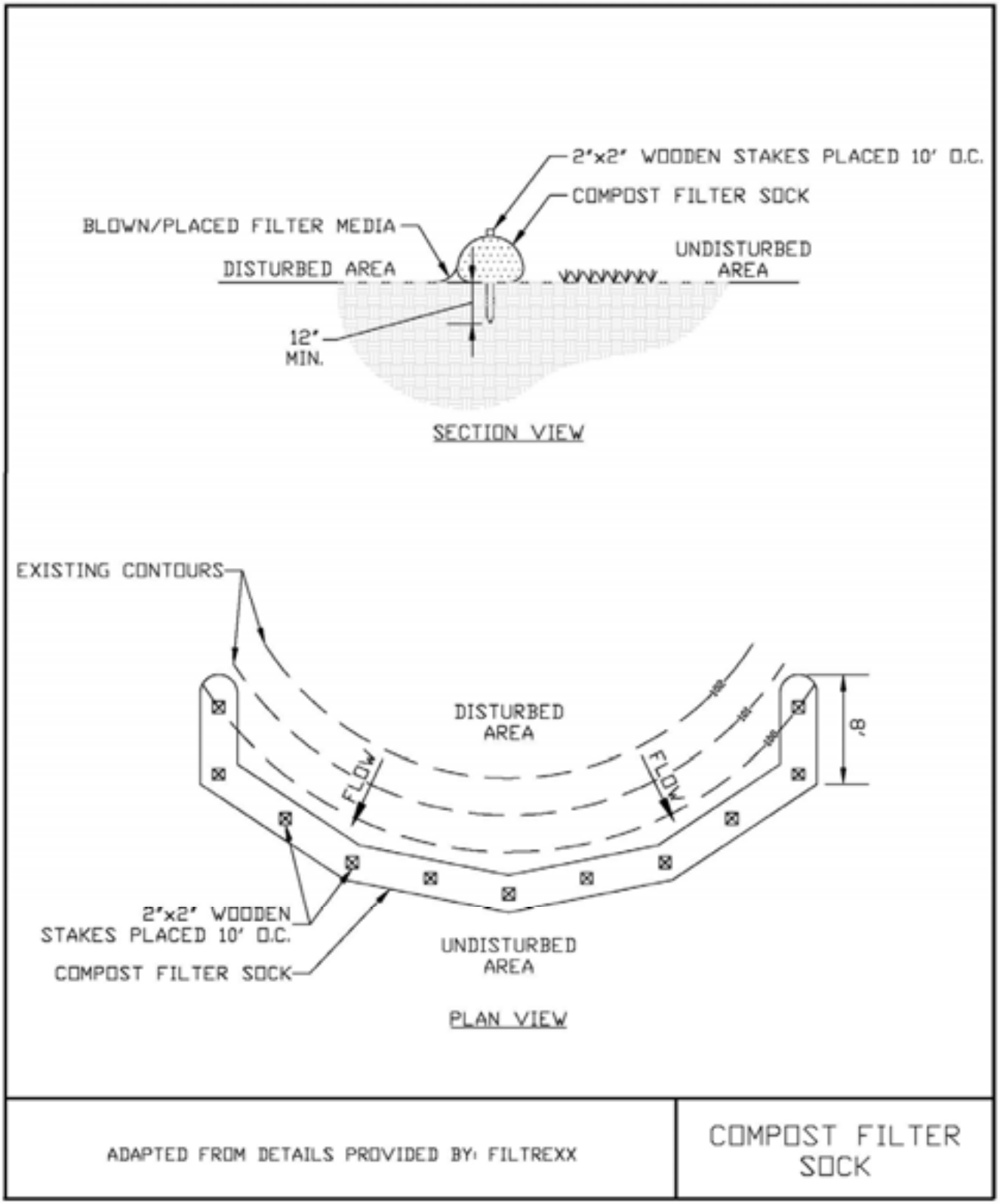
Table 5.1 - Compost Sock Fabric Minimum Specifications Table

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
Material Characteristics	Photodegradable	Photodegradable	Biodegradable	Photodegradable	Photodegradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Table 5.2 - Compost Standards Table

Organic matter content	25% - 100% (dry weight)
Organic portion	Fibrous and elongated
pH	6.0 – 8.0
Moisture content	30% - 60%
Particle size	100% passing a 1" screen and 10 - 50% passing a 3/8" screen
Soluble salt concentration	5.0 dS/m (mmhos/cm) maximum

Figure 5.2
Compost Filter Sock



ATTACHMENT D-2

INSPECTION AND MAINTENANCE REPORT FORM

Inspection and Maintenance Report Form

To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more

Regular Inspector:_____Rainfall Event Inspector:_____Rainfall (inches):_____

Contractor Activities	OK	NO	N/A	Notes
Are construction onsite traffic routes, parking, and storage of equipment and supplies restricted to areas specifically designated for those uses?				
Are locations of temporary soil stock piles of construction materials in approved areas?				
Is there any evidence of spills and resulting cleanup procedures?				
General Erosion & Sediment Controls				
Are sediment and erosion BMPs installed in the proper location and according to the specifications set out in the SWM & ECP?				
Are all operational storm drain inlets protected from sediment inflow?				
Do any seeded or landscaped areas require maintenance, irrigation, fertilization, seeding or mulching?				
Is there any evidence that sediment is leaving the site?				
Is there any evidence of erosion or cut fill slopes?				
Perimeter Road Use				
Does much sediment get tracked on to the perimeter road?				
Is the gravel clean or is it filled with sediment?				
Does all traffic use the perimeter road to leave the site?				
Is maintenance or repair required for the perimeter road?				

_____ _____

Inspected by (Signature) Date

Inspection and Maintenance Report Form

To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more

Inspector:_____

STABILIZATION MEASURES					
Area	Date Since Last Disturbed	Date of Next Disturbance	Stabilized? Yes/No	Stabilized with	Condition

Stabilization Required: _____

_____

_____

_____

_____

_____

To be performed by: _____ On or before: _____

APPENDIX E

HEALTH AND SAFETY PLAN
(INCLUDING COMMUNITY AIR MONITORING PLAN)

BENCHMARK TURNKEY

SITE HEALTH AND SAFETY PLAN
for
BROWNFIELD CLEANUP PROGRAM
REMEDIAL ACTIVITIES

1827 FILLMORE AVENUE SITE

BUFFALO, NEW YORK

April 2019 0421-017-001

Prepared for:

1827 Fillmore LLC

Prepared By:

Benchmark Environmental Engineering & Science, PLLC
2558 Hamburg Turnpike, Suite 300
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(716) 856-0599

In Association With:

TurnKey Environmental Restoration, LLC
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Buffalo, NY 14218
(716) 856-0635

1827 FILLMORE AVENUE SITE
HEALTH AND SAFETY PLAN FOR REMEDIAL ACTIVITIES

ACKNOWLEDGEMENT

Plan Reviewed by (initial):

Corporate Health and Safety Director: Thomas H. Forbes, P.E.

Project Manager: Michael A. Lesakowski

Designated Site Safety and Health Officer: Bryan W. Mayback

Acknowledgement:
I acknowledge that I have reviewed the information contained in this site-specific Health and Safety Plan, and understand the hazards associated with performance of the field activities described herein. I agree to comply with the requirements of this plan.

NAME (PRINT)	SIGNATURE	DATE

BENCHMARK TURNKEY

1827 FILLMORE AVENUE SITE
HEALTH AND SAFETY PLAN FOR REMEDIAL ACTIVITIES

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1827 FILLMORE AVENUE SITE
HEALTH AND SAFETY PLAN FOR REMEDIAL ACTIVITIES

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1.0 INTRODUCTION

1.1 General

In accordance with OSHA requirements contained in 29 CFR 1910.120, this Health and Safety Plan (HASP) describes the specific health and safety practices and procedures to be employed by Benchmark Environmental Engineering & Science, PLLC and TurnKey Environmental Restoration, LLC employees (referred to jointly hereafter as "Benchmark-TurnKey") during Remedial Action activities at the 1827 Fillmore Avenue Site (Site) located in Buffalo, Erie County, New York. This HASP presents procedures for Benchmark-TurnKey employees who will be involved with remedial action field activities; it does not cover the activities of other contractors, subcontractors, or other individuals on the Site. These firms will be required to develop and enforce their own HASPs as discussed in Section 2.0. Benchmark-TurnKey accepts no responsibility for the health and safety of contractor, subcontractor or other personnel.

This HASP presents information on known Site health and safety hazards using available historical information, and identifies the equipment, materials and procedures that will be used to eliminate or control these hazards. Environmental monitoring will be performed during the course of field activities to provide real-time data for on-going assessment of potential hazards.

1.2 Background

The Site consists of one parcel, identified as 1827 Fillmore Avenue, totaling approximately +/- 17.15 acres, located in the City of Buffalo, Erie County, New York. The Site is currently vacant with green areas, asphalt paved areas, former roadways and former building areas. According to the Erie County Real Property & GIS Web page (**http://www2.erie.gov/ecrpts/index.php?q=real-property-parcel-search**) 1827 Fillmore is the only address associated with this property.

From at least 1917 the Site was utilized as a stone quarry. Sometime between the 1940s and 1950s, prior to development of the Kensington Heights Towers in 1958, the stone quarry was backfilled with unknown fill materials. The Kensington Heights apartments were built as low-income housing, formally as a federal/state development. The Site was improved with six (6), seven-story brick apartment buildings with approximately 67

units per building, open space, and on-Site parking. The Site has been vacant since the 1980s. From 2009 to 2014 asbestos abatement and demolition of five (5) of the six (6) buildings were demolished. The sixth building was recently demolished in October 2018.

1.3 Known and Suspected Environmental Conditions

Previous investigations have confirmed that historic operation as a stone quarry, which was backfilled with unknown materials prior to the 1958 construction of low-income housing impacted that Site, which will require remediation prior to redevelopment. Previous investigation findings include:

- On-Site soil/fill materials are impacted with polycyclic aromatic hydrocarbons (PAHs) and metals exceeding Part 375 Soil Cleanup Objectives (SCOs). Elevated PAHs and metals were detected in numerous soil/fill samples collected from across the Site at concentrations exceeding Part 375 Unrestricted SCOs (USCOs), Residential SCOs (RSCOs), Restricted Residential SCOs (RRSCOs), Commercial SCOs (CSCOs) and/or Industrial SCOs (ISCOs). Lead is the primary metal of concern.

The RI was performed in support of the BCP to determine the nature and extent of impacts from these known and suspect environmental conditions on this parcel. Findings of the RI include:

Soil

The 17.15 acre Site is a portion of a greater former quarry that was backfilled with impacted fill materials from unknown sources. While fill materials with elevated PAHs and metals above CSCOs were identified across the Site, the more significant impacted fill is present in four distinct "hot spots," identified as the TP-13 Lead Area, the SB-21 Lead Area, MW-6 Lead Area and the TP-25/SS-13 PAH area.

Groundwater

No significant overburden or bedrock groundwater impacts were identified.

1.4 Parameters of Interest

Based on the previous investigations, previous Site uses, and RI activities, constituents of potential concern (COPCs) in soil and groundwater at the Site include:

- **Semi-Volatile Organic Compounds (SVOCs)** – SVOCs present at elevated concentrations may include benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene, identified

as polycyclic aromatic hydrocarbons (PAHs), which are byproducts of incomplete combustion and impurities in petroleum products.

- **Inorganic Compounds** – The inorganic COPC present at elevated concentrations include arsenic, barium, cadmium, copper, lead, manganese, mercury.

1.5 Overview of Remedial Activities

Benchmark-TurnKey personnel will be on-site to observe and perform remedial activities. The field activities to be completed as part of the remedial are described below.

1. In-situ stabilization of characteristic hazardous lead soil/fill in TP-13 and SB-21 areas. Based the high total lead concentrations in the SB-21, soil immediately surrounding SB-21 will be stabilized and disposed off-site at a commercial landfill.
2. Excavation of lead-impacted soil/fill within the MW-6 area followed by off-site disposal at a commercial sanitary landfill.
3. Excavation of PAH-impacted soil/fill within the TP-25/SS-13 area followed by off-site disposal at a commercial sanitary landfill.
4. Waste characterization sampling.
5. Post-excavation sampling.
6. Soil cover placement.

2.0 ORGANIZATIONAL STRUCTURE

This section of the HASP describes the lines of authority, responsibility and communication as they pertain to health and safety functions at the Site. The purpose of this chapter is to identify the personnel who impact the development and implementation of the HASP and to describe their roles and responsibilities. This chapter also identifies other contractors and subcontractors involved in work operations and establish the lines of communications among them for health and safety matters. The organizational structure described in this chapter is consistent with the requirements of 29 CFR 1910.120(b)(2). This section will be reviewed by the Project Manager and updated as necessary to reflect the current organizational structure at this Site.

2.1 Roles and Responsibilities

Benchmark-TurnKey personnel on the Site must comply with the minimum requirements of this HASP. The specific responsibilities and authority of management, safety and health, and other personnel on this Site are detailed in the following paragraphs.

2.1.1 Corporate Health and Safety Director

The Benchmark-TurnKey Corporate Health and Safety Director is ***Mr. Thomas H. Forbes, P.E.*** The Corporate Health and Safety Director responsible for developing and implementing the Health and Safety program and policies for Benchmark Environmental Engineering & Science, PLLC and TurnKey Environmental Restoration, LLC, and consulting with corporate management to ensure adequate resources are available to properly implement these programs and policies. The Corporate Health and Safety Director coordinates Benchmark-TurnKey's Health and Safety training and medical monitoring programs and assists project management and field staff in developing site-specific health and safety plans.

2.1.2 Project Manager

The Project Manager for this Site is ***Mr. Michael A. Lesakowski.*** The Project Manager has the responsibility and authority to direct all Benchmark-TurnKey work operations at the Site. The Project Manager coordinates safety and health functions with the Site Safety and Health Officer, and bears ultimate responsibility for proper implementation of this HASP. He may delegate authority to expedite and facilitate any application of the

program, including modifications to the overall project approach as necessary to circumvent unsafe work conditions. Specific duties of the Project Manager include:

- Preparing and coordinating the Site work plan.
- Providing Benchmark-TurnKey workers with work assignments and overseeing their performance.
- Coordinating health and safety efforts with the Site Safety and Health Officer (SSHO).
- Reviewing the emergency response coordination plan to assure its effectiveness.
- Serving as the primary liaison with Site contractors and the property owner.

2.1.3 Site Safety and Health Officer

The Site Safety and Health Officer (SSHO) for this Site is ***Mr. Bryan Mayback***. The SSHO reports to the Project Manager. The SSHO is on-site or readily accessible to the Site during work operations and has the authority to halt Site work if unsafe conditions are detected. The specific responsibilities of the SSHO are:

- Managing the safety and health functions for Benchmark-TurnKey personnel on the Site.
- Serving as the point of contact for safety and health matters.
- Ensuring that Benchmark-TurnKey field personnel working on the Site have received proper training (per 29 CFR Part 1910.120(e)), that they have obtained medical clearance to wear respiratory protection (per 29 CFR Part 1910.134), and that they are properly trained in the selection, use and maintenance of personal protective equipment, including qualitative respirator fit testing.
- Performing or overseeing Site monitoring as required by the HASP.
- Assisting in the preparation and review of the HASP.
- Maintaining site-specific safety and health records as described in this HASP.
- Coordinating with the Project Manager, Site Workers, and Contractor's SSHO as necessary for safety and health efforts.

2.1.4 Site Workers

Site workers are responsible for: complying with this HASP or a more stringent HASP, if appropriate (i.e., Contractor and Subcontractor's HASP); using proper PPE;

reporting unsafe acts and conditions to the SSHO; and following the safety and health instructions of the Project Manager and SSHO.

2.1.5 Other Site Personnel

Other Site personnel who will have health and safety responsibilities will include the Test Pit Contractor and Drilling Contractor, who will be responsible for developing, implementing and enforcing a Health and Safety Plan equally stringent or more stringent than Benchmark-TurnKey's HASP. Benchmark-TurnKey assumes no responsibility for the health and safety of anyone outside its direct employ. Each Contractor's HASP shall cover all non- Benchmark/TurnKey Site personnel. Each Contractor shall assign a SSHO who will coordinate with Benchmark-TurnKey's SSHO as necessary to ensure effective lines of communication and consistency between contingency plans.

In addition to Benchmark-TurnKey and Contractor personnel, other individuals who may have responsibilities in the work zone include subcontractors and governmental agencies performing Site inspection work (i.e., the New York State Department of Environmental Conservation (NYSDEC)). The Contractor shall be responsible for ensuring that these individuals have received OSHA-required training (29 CFR 1910.120(e)), including initial, refresher and site-specific training, and shall be responsible for the safety and health of these individuals while they are on-site.

3.0 HAZARD EVALUATION

Due to the presence of certain contaminants at the Site, the possibility exists that workers will be exposed to hazardous substances during field activities. The principal points of exposure would be through direct contact with and incidental ingestion of soil, and through the inhalation of contaminated particles or vapors. Other points of exposure may include direct contact with groundwater. In addition, the use of drilling and/or medium to large-sized construction equipment (e.g., excavator) will also present conditions for potential physical injury to workers. Further, since work will be performed outdoors, the potential exists for heat/cold stress to impact workers, especially those wearing protective equipment and clothing. Adherence to the medical evaluations, worker training relative to chemical hazards, safe work practices, proper personal protection, environmental monitoring, establishment work zones and Site control, appropriate decontamination procedures and contingency planning outlined herein will reduce the potential for chemical exposures and physical injuries.

3.1 Chemical Hazards

As discussed in Section 1.3, historic activities have potentially resulted in impacts to Site soils and groundwater. Table 1 lists exposure limits for airborne concentrations of the COPCs identified in Section 1.4 of this HASP. Brief descriptions of the toxicology of the prevalent COPCs and related health and safety guidance and criteria are provided below.

1. **Polycyclic Aromatic Hydrocarbons (PAHs)** are formed as a result of the pyrolysis and incomplete combustion of organic matter such as fossil fuel. PAH aerosols formed during the combustion process disperse throughout the atmosphere, resulting in the deposition of PAH condensate in soil, water and on vegetation. In addition, several products formed from petroleum processing operations (e.g., roofing materials and asphalt) also contain elevated levels of PAHs. Hence, these compounds are widely dispersed in the environment. PAHs are characterized by a molecular structure containing three or more fused, unsaturated carbon rings. Seven of the PAHs are classified by USEPA as probable human carcinogens (USEPA Class B2). These are benzo(a)pyrene; benzo(a)anthracene; benzo(b)fluoranthene; benzo(k) fluoranthene; chrysene; dibenz(a,h)anthracene; and indeno(1,2,3-cd)pyrene. The primary route of exposure to PAHs is through incidental ingestion and inhalation of contaminated particulates. PAHs are characterized by an organic odor, and exist as oily liquids in pure form. Acute exposure symptoms may include acne-type blemishes in areas of the skin exposed to sunlight.

2. **Arsenic (CAS #7440-38-2)** is a naturally occurring element and is usually found combined with one or more elements, such as oxygen or sulfur. Inhalation is a more important exposure route than ingestion. First phase exposure symptoms include nausea, vomiting, diarrhea and pain in the stomach. Prolonged contact is corrosive to the skin and mucus membranes. Arsenic is considered a Group A human carcinogen by the USEPA. Exposure via inhalation is associated with an increased risk of lung cancer. Exposure via the oral route is associated with an increased risk of skin cancer.

3. **Barium (CAS #7440-39-3)** is found in waste streams from a large number of industrial uses. Acute exposures to barium may cause gastrointestinal disturbances and muscular weakness. Long term exposures may cause hypertension.

4. **Cadmium (CAS #7440-43-9)** is a natural element and is usually combined with one or more elements, such as oxygen, chloride or sulfur. Breathing high levels of cadmium severely damages the lungs and can cause death. Ingestion of high levels of cadmium severely irritates the stomach, leading to vomiting and diarrhea. Long term exposure to lower levels of cadmium leads to a buildup of this substance in the kidneys and possible kidney disease. Other potential long term effects are lung damage and fragile bones. Cadmium is suspected to be a human carcinogen.

5. **Copper (CAS #7440-50-8)** is a naturally occurring metal in the environment in rocks, soil, water and air. The most common use of copper is to make wire, pipes, and sheet metal. High levels of copper exposure may cause irritation of the nose, mouth, and eyes, vomiting, diarrhea, stomach cramps, and death.

6. **Lead (CAS #7439-92-1)** can affect almost every organ and system in our bodies. The most sensitive is the central nervous system, particularly in children. Lead also damages kidneys and the immune system. The effects are the same whether it is breathed or swallowed. Lead may decrease reaction time, cause weakness in fingers, wrists or ankles and possibly affect memory. Lead may cause anemia.

7. **Manganese (CAS #7439-96-5)** is a naturally occurring metal found in rocks and soil. Manganese is commonly used in steel production to improve hardness and strength. It may also be found as an additive in gasoline. The primary route of exposure of manganese is through ingestion. The most common health problems associated with manganese involve the nervous system.

8. **Mercury (CAS #7439-97-6)** is used in industrial applications for the production of caustic and chlorine, and in electrical control equipment and apparatus. Over-exposure to mercury may cause coughing, chest pains, bronchitis, pneumonia, indecision, headaches, fatigue and salivation. Mercury is a skin and eye irritant.

With respect to the anticipated remedial activities discussed in Section 1.5, possible routes of exposure to the above-mentioned contaminants are presented in Table 2. The use of proper respiratory equipment, as outlined in Section 7.0 of this HASP, will minimize the potential for exposure to airborne contamination. Exposure to contaminants through dermal and other routes will also be minimized through the use of protective clothing (Section 7.0), safe work practices (Section 6.0), and proper decontamination procedures (Section 12.0).

3.2 Physical Hazards

Remedial field activities at the 1827 Fillmore Avenue Site may present the following physical hazards:

- Physical injury during heavy construction equipment use, such as backhoes, excavators and drilling equipment.
- Heat/cold stress to employees during the summer/winter months (see Section 10).
- Slip and fall injuries due to rough, uneven terrain and/or open excavations.

These hazards represent only some of the possible means of injury that may be present during remedial operations and sampling activities at the Site. Since it is impossible to list all potential sources of injury, it shall be the responsibility of each individual to exercise proper care and caution during all phases of the work.

4.0 TRAINING

4.1 Site Workers

Personnel performing remedial activities at the Site (such as, but not limited to, equipment operators and general laborers) and who may be exposed to hazardous substances, health hazards, or safety hazards and their supervisors/managers responsible for the Site shall receive training in accordance with 29 CFR 1910.120(e) before they are permitted to engage in operations in the exclusion zone or contaminant reduction zone. This training includes an initial 40-hour Hazardous Waste Site Worker Protection Course, an 8-hour Annual Refresher Course subsequent to the initial 40-hour training, and 3 days of actual field experience under the direct supervision of a trained, experienced supervisor. Additional site-specific training shall also be provided by the SSHO prior to the start of field activities. A description of topics to be covered by this training is provided below.

4.1.1 Initial and Refresher Training

Initial and refresher training is conducted by a qualified instructor as specified under OSHA 29 CFR 1910.120(e)(5), and is specifically designed to meet the requirements of OSHA 29 CFR 1910.120(e)(3) and 1910.120(e)(8). The training covers, as a minimum, the following topics:

- OSHA HAZWOPER regulations.
- Site safety and hazard recognition, including chemical and physical hazards.
- Medical monitoring requirements.
- Air monitoring, permissible exposure limits, and respiratory protection level classifications.
- Appropriate use of personal protective equipment (PPE), including chemical compatibility and respiratory equipment selection and use.
- Work practices to minimize risk.
- Work zones and Site control.
- Safe use of engineering controls and equipment.
- Decontamination procedures.
- Emergency response and escape.

- Confined space entry procedures.
- Heat and cold stress monitoring.
- Elements of a Health and Safety Plan.
- Spill containment.

Initial training also incorporates workshops for PPE and respiratory equipment use (Levels A, B and C), and respirator fit testing. Records and certification received from the course instructor documenting each employee's successful completion of the training identified above are maintained on file at Benchmark-TurnKey's Buffalo, NY office. Contractors and Subcontractors are required to provide similar documentation of training for all their personnel who will be involved in on-site work activities.

Any employee who has not been certified as having received health and safety training in conformance with 29 CFR 1910.120(e) is prohibited from working in the exclusion and contamination reduction zones, or to engage in any on-site work activities that may involve exposure to hazardous substances or wastes.

4.1.2 Site Training

Site workers are given a copy of the HASP and provided a site-specific briefing prior to the commencement of work to ensure that employees are familiar with the HASP and the information and requirements it contains. The Site briefing shall be provided by the SSHO prior to initiating field activities and shall include:

- Names of personnel and alternates responsible for Site safety and health.
- Safety, health and other hazards present on the Site.
- The site lay-out including work zones and places of refuge.
- The emergency communications system and emergency evacuation procedures.
- Use of PPE.
- Work practices by which the employee can minimize risks from hazards.
- Safe use of engineering controls and equipment on the site.
- Medical surveillance, including recognition of symptoms and signs of over-exposure as described in Chapter 5 of this HASP.
- Decontamination procedures as detailed in Chapter 12 of this HASP.

- The emergency response plan as detailed in Chapter 15 of this HASP.
- Confined space entry procedures, if required, as detailed in Chapter 13 of this HASP.
- The spill containment program as detailed in Chapter 9 of this HASP.
- Site control as detailed in Chapter 11 of this HASP.

Supplemental health and safety briefings will also be conducted by the SSHO on an as-needed basis during the course of the work. Supplemental briefings are provided as necessary to notify employees of any changes to this HASP as a result of information gathered during ongoing Site characterization and analysis. Conditions for which the SSHO may schedule additional briefings include, but are not limited to: a change in Site conditions (e.g., based on monitoring results); changes in the work schedule/plan; newly discovered hazards; and safety incidents occurring during Site work.

4.2 Supervisor Training

On-site safety and health personnel who are directly responsible for or who supervise the safety and health of workers engaged in hazardous waste operations (i.e., SSHO) shall receive, in addition to the appropriate level of worker training described in Section 4.1, above, 8 additional hours of specialized supervisory training, in compliance with 29 CFR 1910.120(e)(4).

4.3 Emergency Response Training

Emergency response training is addressed in Appendix A of this HASP, Emergency Response Plan.

4.4 Site Visitors

Each Contractor's SSHO will provide a site-specific briefing to Site visitors and other non- Benchmark-TurnKey personnel who enter the Site beyond the Site entry point. The site-specific briefing will provide information about Site hazards, the Site layout including work zones and places of refuge, the emergency communications system and emergency evacuation procedures, and other pertinent safety and health requirements as appropriate.

Site visitors will not be permitted to enter the exclusion zone or contaminant reduction zones unless they have received the level of training required for Site workers as described in Section 4.1.

5.0 MEDICAL MONITORING

Medical monitoring examinations are provided to Benchmark-TurnKey employees as stipulated under 29 CFR Part 1910.120(f). These exams include initial employment, annual and employment termination physicals for Benchmark-TurnKey employees involved in hazardous waste site field operations. Post-exposure examinations are also provided for employees who may have been injured, received a health impairment, or developed signs or symptoms of over-exposure to hazardous substances or were accidentally exposed to substances at concentrations above the permissible exposure limits without necessary personal protective equipment. Such exams are performed as soon as possible following development of symptoms or the known exposure event.

Medical evaluations are performed by Health Works, an occupational health care provider under contract with Benchmark-TurnKey. Health Works is located in Seneca Square Plaza, 1900 Ridge Road, West Seneca, New York 14224. The facility can be reached at (716) 823-5050 to schedule routine appointments or post-exposure examinations.

Medical evaluations are conducted according to the Benchmark-TurnKey Medical Monitoring Program and include an evaluation of the workers' ability to use respiratory protective equipment. The examinations include:

- Occupational/medical history review.
- Physical exam, including vital sign measurement.
- Spirometry testing.
- Eyesight testing.
- Audio testing (minimum baseline and exit, annual for employees routinely exposed to greater than 85db).
- EKG (for employees >40 years age or as medical conditions dictate).
- Chest X-ray (baseline and exit, and every 5 years).
- Blood biochemistry (including blood count, white cell differential count, serum multiplastic screening).
- Medical certification of physical requirements (i.e., sight, musculoskeletal, cardiovascular) for safe job performance and to wear respiratory protection equipment.

The purpose of the medical evaluation is to determine an employee's fitness for duty

on hazardous waste sites; and to establish baseline medical data.

In conformance with OSHA regulations, Benchmark-TurnKey will maintain and preserve medical records for a period of 30 years following termination of employment. Employees are provided a copy of the physician's post-exam report, and have access to their medical records and analyses.

6.0 SAFE WORK PRACTICES

Benchmark-TurnKey employees shall conform to the following safe work practices during on-site work activities conducted within the exclusion and contamination reduction zones:

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth contact is strictly prohibited.
- The hands and face must be thoroughly washed upon leaving the work area and prior to engaging in any activity indicated above.
- Respiratory protective equipment and clothing must be worn by all personnel entering the Site as required by the HASP or as modified by the Site safety officer. Excessive facial hair (i.e., beards, long mustaches or sideburns) that interferes with the satisfactory respirator-to-face seal is prohibited.
- Contact with surfaces/materials either suspected or known to be contaminated will be avoided to minimize the potential for transfer to personnel, cross contamination and need for decontamination.
- Medicine and alcohol can synergize the effects of exposure to toxic chemicals. Due to possible contraindications, use of prescribed drugs should be reviewed with the Benchmark-TurnKey occupational physician. Alcoholic beverage and illegal drug intake are strictly forbidden during the workday.
- Personnel shall be familiar with standard operating safety procedures and additional instructions contained in this Health and Safety Plan.
- On-site personnel shall use the "buddy" system. No one may work alone (i.e., out of earshot or visual contact with other workers) in the exclusion zone.
- Personnel and equipment in the contaminated area shall be minimized, consistent with effective Site operations.
- Employees have the obligation to immediately report and if possible, correct unsafe work conditions.
- Use of contact lenses on-site will not be permitted. Spectacle kits for insertion into full-face respirators will be provided for Benchmark-TurnKey employees, as requested and required.

The recommended specific safety practices for working around the contractor's equipment (e.g., backhoes, bulldozers, excavators, drill rigs etc.) are as follows:

- Although the Contractor and subcontractors are responsible for their equipment and safe operation of the Site, Benchmark-TurnKey personnel are also responsible for their own safety.
- Subsurface work will not be initiated without first clearing underground utility services.
- Heavy equipment should not be operated within 20 feet of overhead wires. This distance may be increased if windy conditions are anticipated or if lines carry high voltage. The Site should also be sufficiently clear to ensure the project staff can move around the heavy machinery safely.
- Care should be taken to avoid overhead wires when moving heavy-equipment from location to location.
- Hard hats, safety boots and safety glasses should be worn in the vicinity of heavy equipment. Hearing protection is also recommended.
- The work Site should be kept neat. This will prevent personnel from tripping and will allow for fast emergency exit from the Site.
- Proper lighting must be provided when working at night.
- Construction activities should be discontinued during an electrical storm or severe weather conditions.
- The presence of combustible gases should be checked before igniting any open flame.
- Personnel shall stand upwind of any construction operation when not immediately involved in sampling/logging/observing activities.
- Personnel will not approach the edge of an unsecured trench/excavation closer than two feet.

7.0 PERSONAL PROTECTIVE EQUIPMENT

7.1 Equipment Selection

Personal protective equipment (PPE) will be donned when work activities may result in exposure to physical or chemical hazards beyond acceptable limits, and when such exposure can be mitigated through appropriate PPE. The selection of PPE will be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the Site, the task-specific conditions and duration, and the hazards and potential hazards identified at the Site.

Equipment designed to protect the body against contact with known or suspect chemical hazards are grouped into four categories according to the degree of protection afforded. These categories designated A through D consistent with United States Environmental Protection Agency (USEPA) Level of Protection designation, are:

- **Level A:** Should be selected when the highest level of respiratory, skin and eye protection is needed.
- **Level B:** Should be selected when the highest level of respiratory protection is needed, but a lesser level of skin protection is required. Level B protection is the minimum level recommended on initial Site entries until the hazards have been further defined by on-site studies. Level B (or Level A) is also necessary for oxygen-deficient atmospheres.
- **Level C:** Should be selected when the types of airborne substances are known, the concentrations have been measured and the criteria for using air-purifying respirators are met. In atmospheres where no airborne contaminants are present, Level C provides dermal protection only.
- **Level D:** Should not be worn on any Site with elevated respiratory or skin hazards. This is generally a work uniform providing minimal protection.

OSHA requires the use of certain PPE under conditions where an immediate danger to life and health (IDLH) may be present. Specifically, OSHA 29 CFR 1910.120(g)(3)(iii) requires use of a positive pressure self-contained breathing apparatus, or positive pressure air-line respirator equipped with an escape air supply when chemical exposure levels present a substantial possibility of immediate serious injury, illness or death, or impair the ability to escape. Similarly, OSHA 29 CFR 1910.120(g)(3)(iv) requires donning totally-encapsulating chemical protective suits (with a protection level equivalent to Level A protection) in

conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate serious illness, injury or death, or impair the ability to escape.

In situations where the types of chemicals, concentrations, and possibilities of contact are unknown, the appropriate level of protection must be selected based on professional experience and judgment until the hazards can be further characterized. The individual components of clothing and equipment must be assembled into a full protective ensemble to protect the worker from site-specific hazards, while at the same time minimizing hazards and drawbacks of the personal protective gear itself. Ensemble components are detailed below for levels A/B, C, and D protection.

7.2 Protection Ensembles

7.2.1 Level A/B Protection Ensemble

Level A/B ensembles include similar respiratory protection, however Level A provides a higher degree of dermal protection than Level B. Use of Level A over Level B is determined by: comparing the concentrations of identified substances in the air with skin toxicity data, and assessing the effect of the substance (by its measured air concentrations or splash potential) on the small area of the head and neck unprotected by Level B clothing. The recommended PPE for level A/B is:

- Pressure-demand, full-face piece self-contained breathing apparatus (MSHA/NIOSH approved) or pressure-demand supplied-air respirator with escape self-contained breathing apparatus (SCBA).
- Chemical-resistant clothing. For Level A, clothing consists of totally-encapsulating chemical resistant suit. Level B incorporates hooded one-or two-piece chemical splash suit.
- Inner and outer chemical resistant gloves.
- Chemical-resistant safety boots/shoes.
- Hardhat.

7.2.2 Level C Protection Ensemble

Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical-resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing an air-purifying device.

The device (when required) must be an air-purifying respirator (MSHA/NIOSH approved) equipped with filter cartridges. Cartridges must be able to remove the substances encountered. Respiratory protection will be used only with proper fitting, training and the approval of a qualified individual. In addition, an air-purifying respirator can be used only if: oxygen content of the atmosphere is at least 19.5% in volume; substances are identified and concentrations measured; substances have adequate warning properties; the individual passes a qualitative fit-test for the mask; and an appropriate cartridge/canister is used, and its service limit concentration is not exceeded. Recommended PPE for Level C conditions includes:

- Full-face piece, air-purifying respirator equipped with MSHA and NIOSH approved organic vapor/acid gas/dust/mist combination cartridges or as designated by the SSHO.
- Chemical-resistant clothing (hooded, one or two-piece chemical splash suit or disposable chemical-resistant one-piece suit).
- Inner and outer chemical-resistant gloves.
- Chemical-resistant safety boots/shoes.
- Hardhat.

An air-monitoring program is part of all response operations when atmospheric contamination is known or suspected. It is particularly important that the air be monitored thoroughly when personnel are wearing air-purifying respirators. Continual surveillance using direct-reading instruments is needed to detect any changes in air quality necessitating a higher level of respiratory protection.

7.2.3 Level D Protection Ensemble

As indicated above, Level D protection is primarily a work uniform. It can be worn in areas where only boots can be contaminated, where there are no inhalable toxic substances and where the atmospheric contains at least 19.5% oxygen. Recommended PPE for Level D includes:

- Coveralls.
- Safety boots/shoes.
- Safety glasses or chemical splash goggles.

- Hardhat.
- Optional gloves; escape mask; face shield.

7.2.4 Recommended Level of Protection for Site Tasks

Based on current information regarding both the contaminants suspected to be present at the Site and the various tasks that are included in the remedial activities, the minimum required levels of protection for these tasks shall be as identified in Table 3.

8.0 EXPOSURE MONITORING

8.1 General

Based on the results of historic sample analysis and the nature of the proposed work activities at the Site, the possibility exist that organic vapors and/or particulates may be released to the air during intrusive construction activities. Ambient breathing zone concentrations may at times, exceed the permissible exposure limits (PELs) established by OSHA for the individual compounds (see Table 1), in which case respiratory protection will be required. Respiratory and dermal protection may be modified (upgraded or downgraded) by the SSHO based upon real-time field monitoring data.

8.1.1 On-Site Work Zone Monitoring

Benchmark-TurnKey personnel will conduct routine, real-time air monitoring during intrusive construction phases such as excavation, backfilling, drilling, etc. The work area will be monitored at regular intervals using a photoionization detector (PID) and a particulate meter. Observed values will be recorded and maintained as part of the permanent field record.

Additional air monitoring measurements may be made by Benchmark-TurnKey personnel to verify field conditions during subcontractor oversight activities. Monitoring instruments will be protected from surface contamination during use. Additional monitoring instruments may be added if the situations or conditions change. Monitoring instruments will be calibrated in accordance with manufacturer's instructions before use.

8.1.2 Off-Site Community Air Monitoring

In addition to on-Site monitoring within the work zone(s), monitoring at the down-wind portion of the Site perimeter will be conducted. This will provide a real-time method for determination of vapor and/or particulate releases to the surrounding community as a result of ground intrusive investigation work.

Ground intrusive activities are defined in the Generic Community Air Monitoring Plan and attached as Appendix C. Ground intrusive activities include soil/piping excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells. Non-intrusive activities include the collection of soil and sediment samples or the collection of groundwater samples from existing wells. Continuous monitoring is required

for ground intrusive activities and periodic monitoring is required for non-intrusive activities. Periodic monitoring consists of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring while bailing a well, and taking a reading prior to leaving a sampling location. This may be upgraded to continuous if the sampling location is in close proximity to individuals not involved in the Site activity (i.e., on a curb of a busy street). The action levels below will be used during periodic monitoring.

8.2 Monitoring Action Levels

8.2.1 On-Site Work Zone Action Levels

The PID, or other appropriate instrument(s), will be used by Benchmark-TurnKey personnel to monitor organic vapor concentrations as specified in this HASP. In addition, fugitive dust/particulate concentrations will be monitored during major soil intrusion (i.e., well/boring installation) using a real-time particulate monitor as specified in this plan. In the absence of such monitoring, appropriate respiratory protection for particulates shall be donned. Sustained readings obtained in the breathing zone may be interpreted (with regard to other Site conditions) as follows for Benchmark-TurnKey personnel:

- Total atmospheric concentrations of unidentified vapors or gases ranging from 0 to 1 ppm above background on the PID) - Continue operations under Level D (see Appendix A).
- Total atmospheric concentrations of unidentified vapors or gases yielding sustained readings from >1 ppm to 5 ppm above background on the PID (vapors not suspected of containing high levels of chemicals toxic to the skin) - Continue operations under Level C (see Appendix A).
- Total atmospheric concentrations of unidentified vapors or gases yielding sustained readings of >5 ppm to 50 ppm above background on the PID - Continue operations under Level B (see Attachment 1), re-evaluate and alter (if possible) construction methods to achieve lower vapor concentrations.
- Total atmospheric concentrations of unidentified vapors or gases above 50 ppm on the PID - Discontinue operations and exit the work zone immediately.

The particulate monitor will be used to monitor respirable dust concentrations during intrusive activities and during handling of Site soil/fill. Action levels based on the instrument readings shall be as follows:

- Less than 50 mg/m3 - Continue field operations.
- 50-150 mg/m3 - Don dust/particulate mask or equivalent
- Greater than 150 mg/m3 - Don dust/particulate mask or equivalent. Initiate engineering controls to reduce respirable dust concentration (viz., wetting of excavated soils or tools at discretion of Site Health and Safety Officer).

Readings from the field equipment will be recorded and documented on the appropriate Project Field Forms. Instruments will be calibrated before use on a daily basis and the procedure will be documented on the appropriate Project Field Forms.

8.2.2 Community Air Monitoring Action Levels

In addition to the action levels prescribed in Section 8.2.1 for Benchmark-TurnKey personnel on-site, the following criteria shall also be adhered to for the protection of downwind receptors consistent with NYSDOH requirements (Appendix C):

o **ORGANIC VAPOR PERIMETER MONITORING:**

- If the sustained ambient air concentration of organic vapors at the downwind perimeter of the exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the sustained organic vapor decreases below 5 ppm over background, work activities can resume with continued monitoring.
- If the sustained ambient air concentration of organic vapors at the downwind perimeter of the exclusion zone are greater than 5 ppm over background but less than 25 ppm for the 15-minute average, activities can resume provided that: the organic vapor level 200 feet downwind of the working site or half the distance to the nearest off-site residential or commercial structure, whichever is less, but in no case less than 20 feet, is below 5 ppm over background; and more frequent intervals of monitoring, as directed by the Site Health and Safety Officer, are conducted.
- If the sustained organic vapor level is above 25 ppm at the perimeter of the exclusion zone for the 15-minute average, the Site Health and Safety Officer must be notified and work activities shut down. The Site Health and Safety Officer will determine when re-entry of the exclusion zone is possible and will implement downwind air

monitoring to ensure vapor emissions do not impact the nearest off-site residential or commercial structure at levels exceeding those specified in the ***Organic Vapor Contingency Monitoring Plan*** below. All readings will be recorded and will be available for NYSDEC and New York State Department of Health (NYSDOH) personnel to review.

- **ORGANIC VAPOR CONTINGENCY MONITORING PLAN:**

  - If the sustained organic vapor level is greater than 5 ppm over background 200 feet downwind from the work area or half the distance to the nearest off-site residential or commercial property, whichever is less, all work activities must be halted.
  - If, following the cessation of the work activities or as the result of an emergency, sustained organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest off-site residential or commercial property from the work area, then the air quality must be monitored within 20 feet of the perimeter of the nearest off-site residential or commercial structure (20-foot zone).
  - If efforts to abate the emission source are unsuccessful and if sustained organic vapor levels approach or exceed 5 ppm above background within the 20-foot zone for more than 30 minutes, or are sustained at levels greater than 10 ppm above background for longer than one minute, then the ***Major Vapor Emission Response Plan*** (see below) will automatically be placed into effect.

- **MAJOR VAPOR EMISSION RESPONSE PLAN:**

  Upon activation, the following activities will be undertaken:

  1. All Emergency Response Contacts as listed in this Health and Safety Plan and the Emergency Response Plan (Appendix A) will be advised.
  2. The local police authorities will immediately be contacted by the Site Health and Safety Officer and advised of the situation.
  3. Frequent air monitoring will be conducted at 30-minute intervals within the 20-foot zone. If two sustained successive readings below action levels are measured, air monitoring may be halted or modified by the Site Health and Safety Officer.

The following personnel are to be notified in the listed sequence in the event that a Major Vapor Emission Plan is activated:

Responsible Person	Contact	Phone Number
SSHO	Police	911
SSHO	State Emergency Response Hotline	(800) 457-7362

Additional emergency numbers are listed in the Emergency Response Plan included as Appendix A.

- **EXPLOSIVE VAPORS:**
  - Sustained atmospheric concentrations of greater than 10% LEL in the work area - Initiate combustible gas monitoring at the downwind portion of the Site perimeter.
  - Sustained atmospheric concentrations of greater than 10% LEL at the downwind Site perimeter – Halt work and contact local Fire Department.

- **AIRBORNE PARTICULATE COMMUNITY AIR MONITORING**
  - Respirable (PM-10) particulate monitoring will be performed on a continuous basis at the upwind and downwind perimeter of the exclusion zone. The monitoring will be performed using real-time monitoring equipment capable of measuring PM-10 and integrating over a period of 15-minutes for comparison to the airborne particulate action levels. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities. All readings will be recorded and will be available for NYSDEC and NYSDOH review. Readings will be interpreted as follows:
  - If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/m^3) greater than the background (upwind perimeter) reading for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression provided that the downwind PM-10 particulate levels do not exceed 150 ug/m^3 above the upwind level and that visible dust is not migrating from the work area.
  - If, after implementation of dust suppression techniques downwind PM-10 levels are greater than 150 ug/m^3 above the upwind level, work activities must be stopped and dust suppression controls re-evaluated. Work can resume provided that supplemental dust suppression measures and/or other controls are successful in

reducing the downwind PM-10 particulate concentration to within 150 ug/m^3 of the upwind level and in preventing visible dust migration.

Pertinent emergency response information including the telephone number of the Fire Department is included in the Emergency Response Plan (Appendix A).

9.0 SPILL RELEASE/RESPONSE

This chapter of the HASP describes the potential for and procedures related to spills or releases of known or suspected petroleum and/or hazardous substances on the Site. The purpose of this Section of the HASP is to plan appropriate response, control, counter-measures and reporting, consistent with OSHA requirements in 29 CFR 1910.120(b)(4)(ii)(J) and (j)(1)(viii). The spill containment program addresses the following elements:

- Potential hazardous material spills and available controls.
- Initial notification and evaluation.
- Spill response.
- Post-spill evaluation.

9.1 Potential Spills and Available Controls

An evaluation was conducted to determine the potential for hazardous material and oil/petroleum spills at this Site. For the purpose of this evaluation, hazardous materials posing a significant spill potential are considered to be:

- CERCLA Hazardous Substances as identified in 40 CFR Part 302, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).
- Extremely Hazardous Substances as identified in 40 CFR Part 355, Appendix A, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).
- Hazardous Chemicals as defined under Section 311(e) of the Emergency Planning and Community Right-To-Know Act of 1986, where such chemicals are present or will be stored in excess of 10,000 lbs.
- Toxic Chemicals as defined in 40 CFR Part 372, where such chemicals are present or will be stored in excess of 10,000 lbs.
- Chemicals regulated under 6NYCRR Part 597, where such materials pose the potential for release in excess of their corresponding Reportable Quantity (RQ).

Oil/petroleum products are considered to pose a significant spill potential whenever the following situations occur:

- The potential for a "harmful quantity" of oil (including petroleum and non-petroleum-based fuels and lubricants) to reach navigable waters of the U.S. exists (40

CFR Part 112.4). Harmful quantities are considered by USEPA to be volumes that could form a visible sheen on the water or violate applicable water quality standards.

- The potential for any amount of petroleum to reach any waters of NY State, including groundwater, exists. Petroleum, as defined by NY State in 6NYCRR Part 612, is a petroleum-based heat source, energy source, or engine lubricant/maintenance fluid.
- The potential for any release, to soil or water, of petroleum from a bulk storage facility regulated under 6NYCRR Part 612. A regulated petroleum storage facility is defined by NY State as a site having stationary tank(s) and intra-facility piping, fixtures and related equipment with an aggregate storage volume of 1,100 gallons or greater.

9.2 Initial Spill Notification and Evaluation

Any worker who discovers a hazardous substance or oil/petroleum spill will immediately notify the Project Manager and SSHO. The worker will, to the best of his/her ability, report the material involved, the location of the spill, the estimated quantity of material spilled, the direction/flow of the spill material, related fire/explosion incidents, if any, and any associated injuries. The Emergency Response Plan presented in Attachment H2 of this HASP will immediately be implemented if an emergency release has occurred.

Following initial report of a spill, the Project Manager will make an evaluation as to whether the release exceeds RQ levels. If an RQ level is exceeded, the Project Manager will notify the Site owner and NYSDEC at 1-800-457-7362 within 2 hours of spill discovery. The Project Manager will also determine what additional agencies (e.g., USEPA) are to be contacted regarding the release, and will follow-up with written reports as required by the applicable regulations.

9.3 Spill Response

For spill situations, the following general response guidelines will apply:

- Only those personnel involved in overseeing or performing containment operations will be allowed within the spill area. If necessary, the area will be roped, ribboned, or otherwise blocked off to prevent unauthorized access.
- Appropriate PPE, as specified by the SSHO, will be donned before entering the spill area.
- Ignition points will be extinguished/removed if fire or explosion hazards exist.

- Surrounding reactive materials will be removed.
- Drains or drainage in the spill area will be blocked to prevent inflow of spilled materials or applied materials.

For minor spills, the Contractor will maintain a Spill Control and Containment Kit in the Field Office or other readily accessible storage location. The kit will consist of, at a minimum, a 50 lb. bag of "speedy dry" granular absorbent material, absorbent pads, shovels, empty 5-gallon pails and an empty open-top 55-gallon drum. Spilled materials will be absorbed, and shoveled into a 55-gallon drum for proper disposal (NYSDEC approval will be secured for on-site treatment of the impacted soils/absorbent materials, if applicable). Impacted soils will be hand-excavated to the point that no visible signs of contamination remains, and will be drummed with the absorbent.

In the event of a major release or a release that threatens surface water, a spill response contractor will be called to the Site. The response contractor may use heavy equipment (e.g., excavator, backhoe, etc.) to berm the soils surrounding the spill Site or create diversion trenching to mitigate overland migration or release to navigable waters. Where feasible, pumps will be used to transfer free liquid to storage containers. Spill control/cleanup contractors in the Western New York area that may be contacted for assistance include:

- The Environmental Service Group of NY, Inc.: (716) 695-6720
- Environmental Products and Services, Inc.: (716) 447-4700
- Op-Tech: (716) 873-7680

9.4 Post-Spill Evaluation

If a reportable quantity of hazardous material or oil/petroleum is spilled as determined by the Project Manager, a written report will be prepared as indicated in Section 9.2. The report will identify the root cause of the spill, type and amount of material released, date/time of release, response actions, agencies notified and/or involved in cleanup, and procedures to be implemented to avoid repeat incidents. In addition, all re-useable spill cleanup and containment materials will be decontaminated, and spill kit supplies/disposable items will be replenished.

10.0 HEAT/COLD STRESS MONITORING

Since some of the work activities at the Site will be scheduled for both the summer and winter months, measures will be taken to minimize heat/cold stress to Benchmark-TurnKey employees. The Site Safety and Health Officer and/or his or her designee will be responsible for monitoring Benchmark-TurnKey field personnel for symptoms of heat/cold stress.

10.1 Heat Stress Monitoring

Personal protective equipment may place an employee at risk of developing heat stress, a common and potentially serious illnesses often encountered at construction, landfill, waste disposal, industrial or other unsheltered sites. The potential for heat stress is dependent on a number of factors, including environmental conditions, clothing, workload, physical conditioning and age. Personal protective equipment may severely reduce the body's normal ability to maintain temperature equilibrium (via evaporation and convection), and require increased energy expenditure due to its bulk and weight.

Proper training and preventive measures will mitigate the potential for serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat related illness. To avoid heat stress, the following steps should be taken:

- Adjust work schedules.
- Modify work/rest schedules according to monitoring requirements.
- Mandate work slowdowns as needed.
- Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.
- Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods.
- Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must approximately equal the amount of water lost in sweat (i.e., eight fluid ounces must be ingested for approximately every 1 lb of weight lost). The normal thirst mechanism is not sensitive enough to ensure that enough water will be consumed to replace lost perspiration. When heavy sweating occurs, workers should be encouraged to drink more.
- Train workers to recognize the symptoms of heat related illness.

Heat-Related Illness - Symptoms:

- Heat rash may result from continuous exposure to heat or humid air.
- Heat cramps are caused by heavy sweating with inadequate electrolyte replacement. Signs and symptoms include: muscle spasms; pain in the hands, feet and abdomen.
- Heat exhaustion occurs from increased stress on various body organs including inadequate blood circulation due to cardiovascular insufficiency or dehydration. Signs and symptoms include: pale, cool, moist skin; heavy sweating; dizziness; nausea; fainting.
- Heat stroke is the most serious form of heat stress. Temperature regulation fails and the body temperature rises to critical levels. Immediate action must be taken to cool the body before serious injury and death occur. Competent medical help must be obtained. Signs and symptoms are: red, hot, usually dry skin; lack of or reduced perspiration; nausea; dizziness and confusion; strong, rapid pulse; coma.

The monitoring of personnel wearing protective clothing should commence when the ambient temperature is 70 degrees Fahrenheit or above. For monitoring the body's recuperative ability to excess heat, one or more of the following techniques should be used as a screening mechanism.

- Heart rate may be measured by the radial pulse for 30 seconds as early as possible in the resting period. The rate at the beginning of the rest period should not exceed 100 beats per minute. If the rate is higher, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest periods stay the same, If the pulse rate is 100 beats per minute at the beginning of the nest rest period, the following work cycle should be further shortened by 33%.
- Body temperature may be measured orally with a clinical thermometer as early as possible in the resting period. Oral temperature at the beginning of the rest period should not exceed 99.6 degrees Fahrenheit. If it does, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest period remains the same. However, if the oral temperature exceeds 99.6 degrees Fahrenheit at the beginning of the next period, the work cycle may be further shortened by 33%. Oral temperature should be measured at the end of the rest period to make sure that it has dropped below 99.6 degrees Fahrenheit. No Benchmark-TurnKey employee will be permitted to continue wearing semi-permeable or impermeable garments when his/her oral temperature exceeds 100.6 degrees Fahrenheit.

10.2 Cold Stress Monitoring

Exposure to cold conditions may result in frostbite or hypothermia, each of which progresses in stages as shown below.

- **Frostbite** occurs when body tissue (usually on the extremities) begins to freeze. The three states of frostbite are:
    1. **Frost nip** - This is the first stage of the freezing process. It is characterized by a whitened area of skin, along with a slight burning or painful sensation. Treatment consists of removing the victim from the cold conditions, removal of boots and gloves, soaking the injured part in warm water (102 to 108 degrees Fahrenheit) and drinking a warm beverage. Do not rub skin to generate friction/ heat.
    2. **Superficial Frostbite** - This is the second stage of the freezing process. It is characterized by a whitish gray area of tissue, which will be firm to the touch but will yield little pain. The treatment is identical for Frost nip.
    3. **Deep Frostbite** - In this final stage of the freezing process the affected tissue will be cold, numb and hard and will yield little to no pain. Treatment is identical to that for Frost nip.

- **Hypothermia** is a serious cold stress condition occurring when the body loses heat at a rate faster than it is produced. If untreated, hypothermia may be fatal. The stages of hypothermia may not be clearly defined or visible at first, but generally include:
    1. Shivering
    2. Apathy (i.e., a change to an indifferent or uncaring mood)
    3. Unconsciousness
    4. Bodily freezing

    Employees exhibiting signs of hypothermia should be treated by medical professionals. Steps that can be taken while awaiting help include:

    1. Remove the victim from the cold environment and remove wet or frozen clothing. (Do this carefully as frostbite may have started.)
    2. Perform active re-warming with hot liquids for drinking (Note: do not give the victim any liquid containing alcohol or caffeine) and a warm water bath (102 to 108 degrees Fahrenheit).
    3. Perform passive re-warming with a blanket or jacket wrapped around the victim.

In any potential cold stress situation, it is the responsibility of the Site Health and Safety Officer to encourage the following:

- Education of workers to recognize the symptoms of frostbite and hypothermia.
- Workers should dress warmly, with more layers of thin clothing as opposed to one thick layer.
- Personnel should remain active and keep moving.
- Personnel should be allowed to take shelter in a heated areas, as necessary.
- Personnel should drink warm liquids (no caffeine or alcohol if hypothermia has set in).
- For monitoring the body's recuperation from excess cold, oral temperature recordings should occur:
  - At the Site Safety Technicians discretion when suspicion is based on changes in a worker's performance or mental status.
  - At a workers request.
  - As a screening measure, two times per shift, under unusually hazardous conditions (e.g., wind chill less than 20 degrees Fahrenheit or wind chill less than 30 degrees Fahrenheit with precipitation).
  - As a screening measure, whenever anyone worker on-site develops hypothermia.

Any person developing moderate hypothermia (a core body temperature of 92 degrees Fahrenheit) will not be allowed to return to work for 48 hours without the recommendation of a qualified medical doctor.

11.0 WORK ZONES AND SITE CONTROL

Work zones around the areas designated for construction activities will be established on a daily basis and communicated to employees and other Site users by the SSHO. It shall be each Contractor's Site Safety and Health Officer's responsibility to ensure that Site workers are aware of the work zone boundaries and to enforce proper procedures in each area. The zones will include:

- Exclusion Zone ("Hot Zone"): The area where contaminated materials may be exposed, excavated or handled and all areas where contaminated equipment or personnel may travel. Flagging tape will delineate the zone. Personnel entering the Exclusion Zone must wear the prescribed level of personal protective equipment identified in Section 7.
- Contamination Reduction Zone: The zone where decontamination of personnel and equipment takes place. Any potentially contaminated clothing, equipment and samples must remain in the Contamination Reduction Zone until decontaminated.
- Support Zone: The part of the site that is considered non-contaminated or "clean." Support equipment will be located in this zone, and personnel may wear normal work clothes within this zone.

In the absence of other task-specific work zone boundaries established by the SSHO, the following boundaries will apply to investigation and construction activities involving disruption or handling of Site soils or groundwater:

- Exclusion Zone: 50 foot radius from the outer limit of the sampling/construction activity.
- Contaminant Reduction Zone: 100 foot radius from the outer limit of the sampling/construction activity.
- Support Zone: Areas outside the Contaminant Reduction Zone.

Access of non-essential personnel to the Exclusion and Contamination Reduction Zones will be strictly controlled by the SSHO. Only personnel who are essential to the completion of the task will be allowed access to these areas and only if they are wearing the prescribed level of protection. Entrance of personnel must be approved by the SSHO.

The SSHO will maintain a Health and Safety Logbook containing the names of Benchmark-TurnKey workers and their level of protection. The zone boundaries may be

changed by the SSHO as environmental conditions warrant, and to respond to the necessary changes in work locations on-site.

12.0 DECONTAMINATION

12.1 Decontamination for Benchmark-TurnKey Employees

The degree of decontamination required is a function of a particular task and the environment within which it occurs. The following decontamination procedure will remain flexible, thereby allowing the decontamination crew to respond appropriately to the changing environmental conditions that may arise at the Site. Benchmark-TurnKey personnel on-site shall follow the procedure below, or the Contractor's procedure (if applicable), whichever is more stringent.

Station 1 - Equipment Drop: Deposit visibly contaminated (if any) re-useable equipment used in the contamination reduction and exclusion zones (tools, containers, monitoring instruments, radios, clipboards, etc.) on plastic sheeting.

Station 2 - Boots and Gloves Wash and Rinse: Scrub outer boots and outer gloves. Deposit tape and gloves in waste disposal container.

Station 3 - Tape, Outer Boot and Glove Removal: Remove tape, outer boots and gloves. Deposit tape and gloves in waste disposal container.

Station 4 - Canister or Mask Change: If worker leaves exclusive zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot cover donned, and worker returns to duty.

Station 5 - Outer Garment/Face Piece Removal: Protective suit removed and deposited in separate container provided by Contractor. Face piece or goggles are removed if used. Avoid touching face with fingers. Face piece and/or goggles deposited on plastic sheet. Hard hat removed and placed on plastic sheet.

Station 6 - Inner Glove Removal: Inner gloves are the last personal protective equipment to be removed. Avoid touching the outside of the gloves with bare fingers. Dispose of these gloves in waste disposal container.

Following PPE removal, personnel shall wash hands, face and forearms with absorbent wipes. If field activities proceed for duration of 6 consecutive months or longer, shower facilities will be provided for worker use in accordance with OSHA 29 CFR 1910.120(n).

12.2 Decontamination for Medical Emergencies

In the event of a minor, non-life-threatening injury, personnel should follow the decontamination procedures as defined, and then administer first-aid.

In the event of a major injury or other serious medical concern (e.g., heat stroke), immediate first-aid is to be administered and the victim transported to the hospital in lieu of further decontamination efforts unless exposure to a Site contaminant would be considered "Immediately Dangerous to Life or Health."

12.3 Decontamination of Field Equipment

The Contractor in accordance with his approved Health and Safety Plan in the Contamination Reduction Zone will conduct decontamination of heavy equipment. As a minimum, this will include manually removing heavy soil contamination, followed by steam cleaning on an impermeable pad.

Benchmark-TurnKey personnel will conduct decontamination of tools used for sample collection purposes. It is expected that tools will be constructed of nonporous, nonabsorbent materials (i.e., metal), which will aid in the decontamination effort. Any tool or part of a tool made of porous, absorbent material (i.e., wood) will be placed into suitable containers and prepared for disposal.

Decontamination of bailers, split-spoons, spatula knives, and other tools used for environmental sampling and examination shall be as follows:

- Disassemble the equipment
- Water wash to remove visible foreign matter.
- Wash with detergent.
- Rinse parts with distilled-deionized water.
- Allow to air dry.
- Wrap parts in aluminum foil or polyethylene.

13.0 CONFINED SPACE ENTRY

OSHA 29 CFR 1910.146 identifies a confined space as a space that is large enough and so configured that an employee can physically enter and do assigned work, has limited or restricted means for entry and exit, and is not intended for continuous employee occupancy. Confined spaces include, but are not limited to, trenches, storage tanks, process vessels, pits, sewers, tunnels, underground utility vaults, pipelines, sumps, wells, and excavations.

Confined space entry by Benchmark-TurnKey employees is not anticipated to be necessary to complete the remedial activities identified in Section 2.0. In the event that the scope of work changes or confined space entry appears necessary, the Project Manager will be consulted to determine if feasible engineering alternatives to confined space entry can be implemented. If confined space entry by Benchmark-TurnKey employees cannot be avoided through reasonable engineering measures, task-specific confined space entry procedures will be developed and a confined-space entry permit will be issued through Benchmark-TurnKey's corporate Health and Safety Director. Benchmark-TurnKey employees shall not enter a confined space without these procedures and permits in place.

14.0 FIRE PREVENTION AND PROTECTION

14.1 General Approach

Recommended practices and standards of the National Fire Protection Association (NFPA) and other applicable regulations will be followed in the development and application of Project Fire Protection Programs. When required by regulatory authorities, the project management will prepare and submit a Fire Protection Plan for the approval of the contracting officers, authorized representative or other designated official. Essential considerations for the Fire Protection Plan will include:

- Proper Site preparation and safe storage of combustible and flammable materials.
- Availability of coordination with private and public fire authorities.
- Adequate job-site fire protection and inspections for fire prevention.
- Adequate indoctrination and training of employees.

14.2 Equipment and Requirements

Fire extinguishers will be provided by each Contractor and are required on heavy equipment and in each field trailer. Fire extinguishers will be inspected, serviced, and maintained in accordance with the manufacturer's instructions. As a minimum, extinguishers shall be checked monthly and weighed semi-annually, and recharged if necessary. Recharge or replacement shall be mandatory immediately after each use.

14.3 Flammable and Combustible Substances

Storage, handling or use of flammable and combustible substances will be under the supervision of qualified persons. Tanks, containers and pumping equipment, whether portable or stationary, used for the storage and handling of flammable and combustible liquids, will meet the recommendations of the National Fire Protection Association.

14.4 Hot Work

If the scope of work necessitates welding or blowtorch operation, the hot work permit presented in Appendix B will be completed by the SSHO and reviewed/issued by the Project Manager.

15.0 EMERGENCY INFORMATION

In accordance with OSHA 29 CFR Part 1910, an Emergency Response Plan is attached to this HASP as Appendix A. The hospital route map is presented within Appendix A as Figure 1.

16.0 REFERENCES

1. New York State Department of Environmental Conservation. *DER-10; Technical Guidance for Site Investigation and Remediation.* May 2010.

TABLES

TABLE 1
TOXICITY DATA FOR CONSTITUENTS OF POTENTIAL CONCERN

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

Parameter	Synonyms	CAS No.	Code	Concentration Limits [1]		
				PEL	TLV	IDLH
Semi-volatile Organic Compounds (SVOCs)[2]: ppm						
Benzo(a)anthracene	*none*	56-55-3	*none*	--	--	--
Benzo(a)pyrene	*none*	50-32-8	*none*	--	--	--
Benzo(b)fluoranthene	*none*	205-99-2	*none*	--	--	--
Dibenz(a,h)anthracene	*none*	53-70-3	*none*	--	--	--
Indeno(1,2,3-cd)pyrene	*none*	193-39-5	*none*	--	--	--
Inorganic Compounds[2]: mg/m[3]						
Arsenic	*none*	7440-38-2	Ca	0.01	0.01	5
Barium	*none*	7440-39-3	*none*	--	0.5	--
Cadmium	*none*	7440-43-9	Ca	0.005	0.01	9
Copper	*none*	7440-50-8	*none*	1	1	100
Lead	*none*	7439-92-1	*none*	0.05	0.15	100
Manganese	*none*	7439-96-5	*none*	0.2	0.2	500
Mercury	*none*	7439-97-6	C-0.1	0.1	0.05	10

Notes:

1. Concentration limits as reported by NIOSH Pocket Guide to Chemical Hazards, February 2004 (NIOSH Publication No. 97-140, fourth printing with changes and updates).
2. " -- " = concentration limit not available; exposure should be minimized to the extent feasible through appropriate engineering controls & PPE.

Explanation:

Ca = NIOSH considers constituent to be a potential occupational carcinogen.
C-## = Ceiling Level equals the maximum exposure concentration allowable during the work day.
IDLH = Immediately Dangerous to Life or Health.
ND indicates that an IDLH has not been determined.
TLV = Threshold Limit Value, established by American Conference of Industrial Hygienists (ACGIH), equals the maximum exposure concentration allowable for 8 hours/day @ 40 hours/week.

TLVs are the amounts of chemicals in the air that almost all healthy adult workers are predicted to be able to tolerate without adverse effects. There are three types.
TLV-TWA (TLV-Time-Weighted Average) which is averaged over the normal eight-hour day/forty-hour work week. (Most TLVs.)
TLV-STEL or Short Term Exposure Limits are 15 minute exposures that should not be exceeded for even an instant. It is not a stand alone value but is accompanied by the TLV-TWA.
TLV-C or Ceiling limits are the concentration that should not be exceeded during any part of the working exposure.
Unless the initials "STEL" or "C" appear in the Code column, the TLV value should be considered to be the eight-hour TLV-TWA.

PEL = Permissible Exposure Limit, established by OSHA, equals the maximium exposure conconcentration allowable for 8 hours per day @ 40 hours per week

TABLE 2
POTENTIAL ROUTES OF EXPOSURE TO THE CONSTITUENTS OF POTENTIAL CONCERN

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

Activity [1]	Direct Contact with Soil/Fill	Inhalation of Vapors or Dust	Direct Contact with Water
Remedial Investigation Tasks			
1. In-Situ Stabilization of Characteristic Hazardous Lead Soil/Fill, Off-Site Disposal, & Backfill	x	x	x
2. Excavation of PAH-Impacted Soil/Fill, Off-Site Disposal, & Backfill	x	x	x
3. Post-Excavation Sampling	x	x	
4. Waste Characterization Sampling	x	x	

Notes:
1. Activity as described in Section 1.5 of the Health and Safety Plan.

TABLE 3
REQUIRED LEVELS OF PROTECTION FOR REMEDIAL TASKS

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

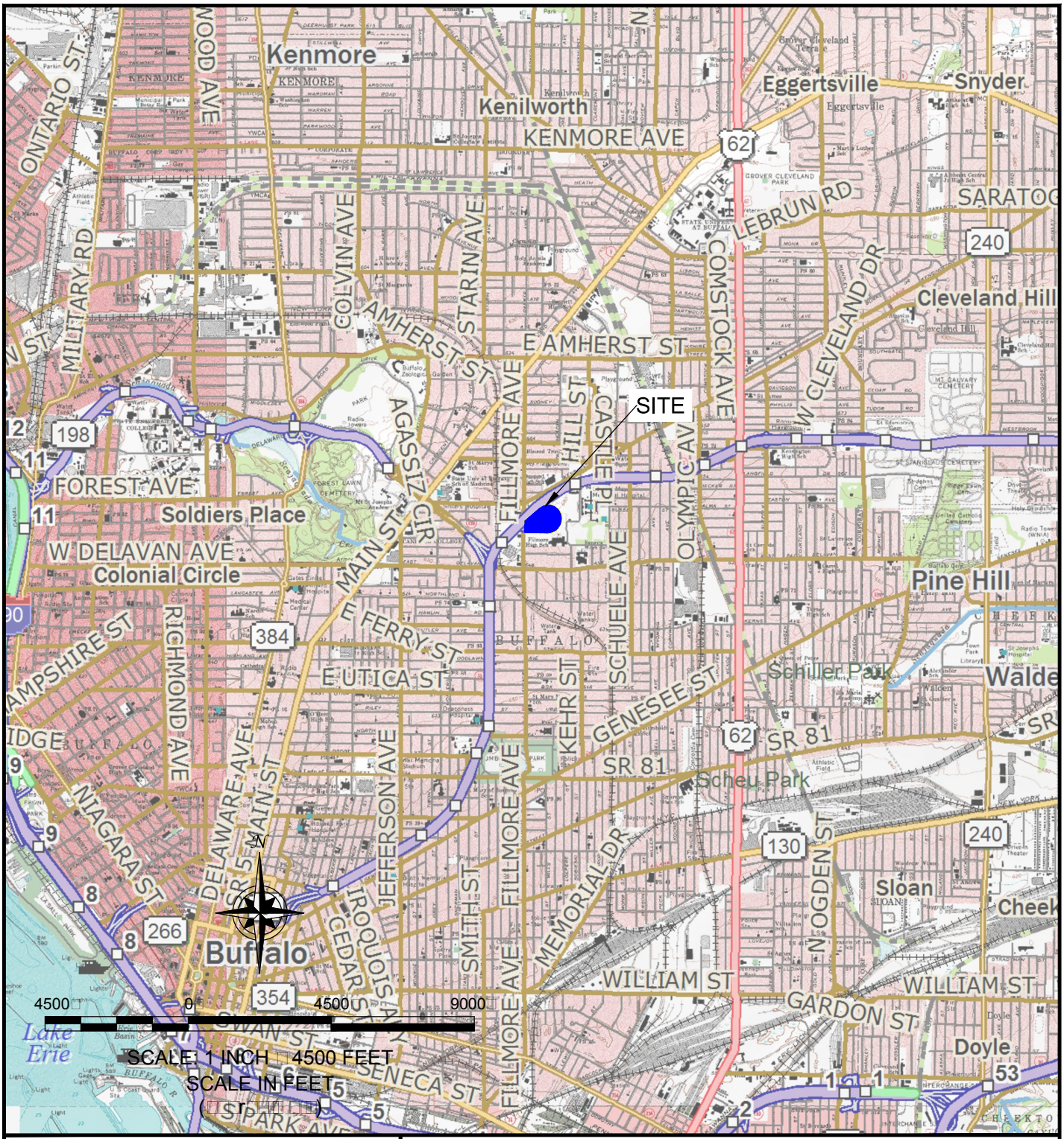
Activity	Respiratory Protection [1]	Clothing	Gloves [2]	Boots [2, 3]	Other Required PPE/ Modifications [2, 4]
Remedial Action Tasks					
1. In-Situ Stabilization of Characteristic Hazardous Lead Soil/Fill, Off-Site Disposal, & Backfill	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	HH SGSS
2. Excavation of PAH-Impacted Soil/Fill, Off-Site Disposal, & Backfill	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	HH SGSS
3. Post-Excavation Sampling	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	SGSS
4. Waste Characterization Sampling	Level D (upgrade to Level C if necessary)	Work Uniform or Tyvek	L/N	outer: L inner: STSS	SGSS

Notes:
1. Respiratory equipment shall conform to guidelines presented in Section 7.0 of this HASP. The Level C requirement is an air-purifying respirator equiped with organic compound/acid gas/dust cartridge.
2. HH = hardhat; L= Latex; L/N = latex inner glove, nitrile outer glove; N = Nitrile; S = Saranex; SG = safety glasses; SGSS = safety glasses with sideshields; STSS = steel toe safety shoes.
3. Latex outer boot (or approved overboot) required whenever contact with contaminated materials may occur. SSHO may downgrade to STSS (steel-toed safety shoes) if contact will be limited to cover/replacement soils.
4. Dust masks shall be donned as directed by the SSHO (site safety and health officer) or site safety technician whenever potentially contaminated airborne particulates (i.e., dust) are present

FIGURES

F:\CAD\Benchmark\Rupp, Baase, Pfalzgraf & Cunningham LLC\1827 Fillmore Avenue\03 - RI Work Plan\HASP\Figure 1; Site Location & DiciniitDMap.dwg

FIGURE 1



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0421-017-001

DATE: JUNE 2017

DRAFTED BY: CCB

SITE LO□ATIO□ □ □I□I□IT□ MAP

HEALTH AND SAFETY PLAN

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

PREPARED FOR

1827 FILLMORE LLC

ATTACHMENT A

EMERGENCY RESPONSE PLAN

BENCHMARK TURNKEY

EMERGENCY RESPONSE PLAN
for
BROWNFIELD CLEANUP PROGRAM
REMEDIAL ACTIVITIES

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

April 2019 0421-017-001

Prepared for:
1827 Fillmore LLC

Prepared By:

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In Association With:

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1827 FILLMORE AVENUE SITE
HEALTH AND SAFETY PLAN FOR REMEDIAL ACTIVITIES
ATTACHMENT A: EMERGENCY RESPONSE PLAN

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1.0 GENERAL

This report presents the site-specific Emergency Response Plan (ERP) referenced in the Site Health and Safety Plan (HASP) prepared for Remedial activities at the 1827 Fillmore Avenue Site in Buffalo, New York. This attachment of the HASP describes potential emergencies that may occur at the Site; procedures for responding to those emergencies; roles and responsibilities during emergency response; and training all workers must receive in order to follow emergency procedures. This ERP also describes the provisions this Site has made to coordinate its emergency response planning with other contractors on-site and with off-site emergency response organizations.

This ERP is consistent with the requirements of 29 CFR 1910.120(l) and provides the following site-specific information:

- Pre-emergency planning.
- Personnel roles, lines of authority, and communication.
- Emergency recognition and prevention.
- Safe distances and places of refuge.
- Evacuation routes and procedures.
- Decontamination procedures.
- Emergency medical treatment and first aid.
- Emergency alerting and response procedures.
- Critique of response and follow-up.
- Emergency personal protective equipment (PPE) and equipment.

2.0 PRE-EMERGENCY PLANNING

This Site has been evaluated for potential emergency occurrences, based on site hazards, the required work tasks, the site topography, and prevailing weather conditions. The results of that evaluation indicate the potential for the following site emergencies to occur at the locations indicated.

Type of Emergency:

1. Medical, due to physical injury

Source of Emergency:

1. Slip/trip/fall

Location of Source:

1. Non-specific

3.0 ON-SITE EMERGENCY RESPONSE EQUIPMENT

Emergency procedures may require specialized equipment to facilitate worker rescue, contamination control and reduction, or post-emergency clean up. Emergency response equipment available on the Site is listed below. The equipment inventory and storage locations are based on the potential emergencies described above. This equipment inventory is designed to meet on-site emergency response needs and any specialized equipment needs that off-site responders might require because of the hazards at this Site but not ordinarily stocked.

Any additional personal protective equipment (PPE) required and stocked for emergency response is also listed in below. During an emergency, the Emergency Response Coordinator (ERC) is responsible for specifying the level of PPE required for emergency response. At a minimum, PPE used by emergency responders will comply with Section 7.0, Personal Protective Equipment, of this HASP. Emergency response equipment is inspected at regular intervals and maintained in good working order. The equipment inventory is replenished as necessary to maintain response capabilities.

Emergency Equipment	Quantity	Location
First Aid Kit	1	Site Vehicle
Chemical Fire Extinguisher	2 (minimum)	Heavy equipment and Site Vehicle

Emergency PPE	Quantity	Location
Full-face respirator	1 for each worker	Site Vehicle
Chemical-resistant suits	4 (minimum)	Site Vehicle

4.0 EMERGENCY PLANNING MAPS

An area-specific map of the Site will be developed on a daily basis during performance of field activities. The map will be marked to identify critical on-site emergency planning information, including: emergency evacuation routes, a place of refuge, an assembly point, and the locations of key site emergency equipment. Site zone boundaries will be shown to alert responders to known areas of contamination. There are no major topographical features, however the direction of prevailing winds/weather conditions that could affect emergency response planning are also marked on the map. The map will be posted at site-designated place of refuge and inside the Benchmark-TurnKey personnel field vehicle.

5.0 EMERGENCY CONTACTS

The following identifies the emergency contacts for this ERP.

Emergency Telephone Numbers:

Project Manager: ***Michael Lesakowski***
Work: (716) 856-0599
Mobile: (716) 818-3954

Corporate Health and Safety Director: ***Thomas H. Forbes***
Work: (716) 856-0599
Mobile: (716) 864-1730

Site Safety and Health Officer (SSHO): ***Bryan W. Mayback***
Work: (716) 856-0599
Mobile: (716) 844-1699

Alternate SSHO: ***Nathan Munley***
Work: (716) 856-0635
Mobile: (716) 289-1072

ERIE COUNTY MEDICAL CENTER (ER):	(800) 729-5433
FIRE:	911
AMBULANCE:	911
BUFFALO POLICE:	911
STATE EMERGENCY RESPONSE HOTLINE:	(800) 457-7362
NATIONAL RESPONSE HOTLINE:	(800) 424-8802
NYSDOH:	(716) 847-4385
NYSDEC:	(716) 851-7220
NYSDEC 24-HOUR SPILL HOTLINE:	(800) 457-7252

The Site location is:

1827 Fillmore Avenue
Buffalo, New York 14214
Site Phone Number: (Insert Cell Phone or Field Trailer): _____

6.0 EMERGENCY ALERTING & EVACUATION

Internal emergency communication systems are used to alert workers to danger, convey safety information, and maintain site control. Any effective system can be employed. Two-way radio headsets or field telephones are often used when work teams are far from the command post. Hand signals and air-horn blasts are also commonly used. Every system must have a backup. It shall be the responsibility of each contractor's SSHO to ensure personnel entering the site understand an adequate method of internal communication. Unless personnel are otherwise informed, the following signals shall be used.

1. Emergency signals by portable air horn, siren, or whistle: two short blasts, personal injury; continuous blast, emergency requiring site excavation.
2. Visual signals: hand gripping throat, out of air/cannot breathe; hands on top of head, need assistance; thumbs up, affirmative/ everything is OK; thumbs down, no/ negative; grip partner's wrist or waist, leave area immediately.

If evacuation notice is given, site workers leave the worksite with their respective buddies, if possible, by way of the nearest exit. Emergency decontamination procedures detailed in Section 12.0 of the HASP are followed to the extent practical without compromising the safety and health of site personnel. The evacuation routes and assembly area will be determined by conditions at the time of the evacuation based on wind direction, the location of the hazard source, and other factors as determined by rehearsals and inputs from emergency response organizations. Wind direction indicators are located so that workers can determine a safe up wind or cross wind evacuation route and assembly area if not informed by the emergency response coordinator at the time the evacuation alarm sounds. Since work conditions and work zones within the site may be changing on daily basis, it shall be the responsibility of the construction SSHO to review evacuation routes and procedures as necessary and to inform all Benchmark-TurnKey workers of any changes.

Personnel exiting the site will gather at a designated assembly point. To determine that everyone has successfully exited the site, personnel will be accounted for at the assembly site. If any worker cannot be accounted for, notification is given to the SSHO (***Bryan Mayback*** or ***Nathan Munley***) so that appropriate action can be initiated. Contractors and subcontractors on this site have coordinated their emergency response plans to ensure that these plans are compatible and that source(s) of potential emergencies are recognized, alarm

systems are clearly understood, and evacuation routes are accessible to all personnel relying upon them.

7.0 EXTREME WEATHER CONDITIONS

In the event of adverse weather conditions, the SSHO in conjunction with the Contractor's SSHO will determine if engineering operations can continue without sacrificing the health and safety of site personnel. Items to be considered prior to determining if work should continue include but are not limited to:

- Potential for heat/cold stress.
- Weather-related construction hazards (e.g., flooding or wet conditions producing undermining of structures or sheeting, high wind threats, etc.).
- Limited visibility.
- Potential for electrical storms.
- Limited site access/egress (e.g., due to heavy snow)

8.0 EMERGENCY MEDICAL TREATMENT & FIRST AID

Personnel Exposure:

The following general guidelines will be employed in instances where health impacts threaten to occur acute exposure is realized:

- Skin Contact: Use copious amounts of soap and water. Wash/rinse affected area for at least 15 minutes. Decontaminate and provide medical attention. Eyewash stations will be provided on site. If necessary, transport to Hospital.
- Inhalation: Move to fresh air and, if necessary, transport to Hospital.
- Ingestion: Decontaminate and transport to Hospital.

Personal Injury:

Minor first-aid will be applied on-site as deemed necessary. In the event of a life threatening injury, the individual should be transported to Hospital via ambulance. The SSHO will supply available chemical specific information to appropriate medical personnel as requested.

First aid kits will conform to Red Cross and other applicable good health standards, and shall consist of a weatherproof container with individually sealed packages for each type of item. First aid kits will be fully equipped before being sent out on each job and will be checked weekly by the SSHO to ensure that the expended items are replaced.

Directions to Erie County Medical Center (see Figure 1):

The following directions describe the best route from the Site to Erie County Medical Center located 1.2 miles away:

- Head **north** on **Fillmore Avenue** toward **Kensington Avenue**
- Turn **right** at the first cross street onto **Kensington Avenue**
- Turn **right** onto **Grider Street**
- Turn **right**
- Erie County Medical Center is located at **462 Grider Street, Buffalo, New York**

9.0 EMERGENCY RESPONSE CRITIQUE & RECORD KEEPING

Following an emergency, the SSHO and Project Manager shall review the effectiveness of this Emergency Response Plan (ERP) in addressing notification, control and evacuation requirements. Updates and modifications to this ERP shall be made accordingly. It shall be the responsibility of each contractor to establish and assure adequate records of the following:

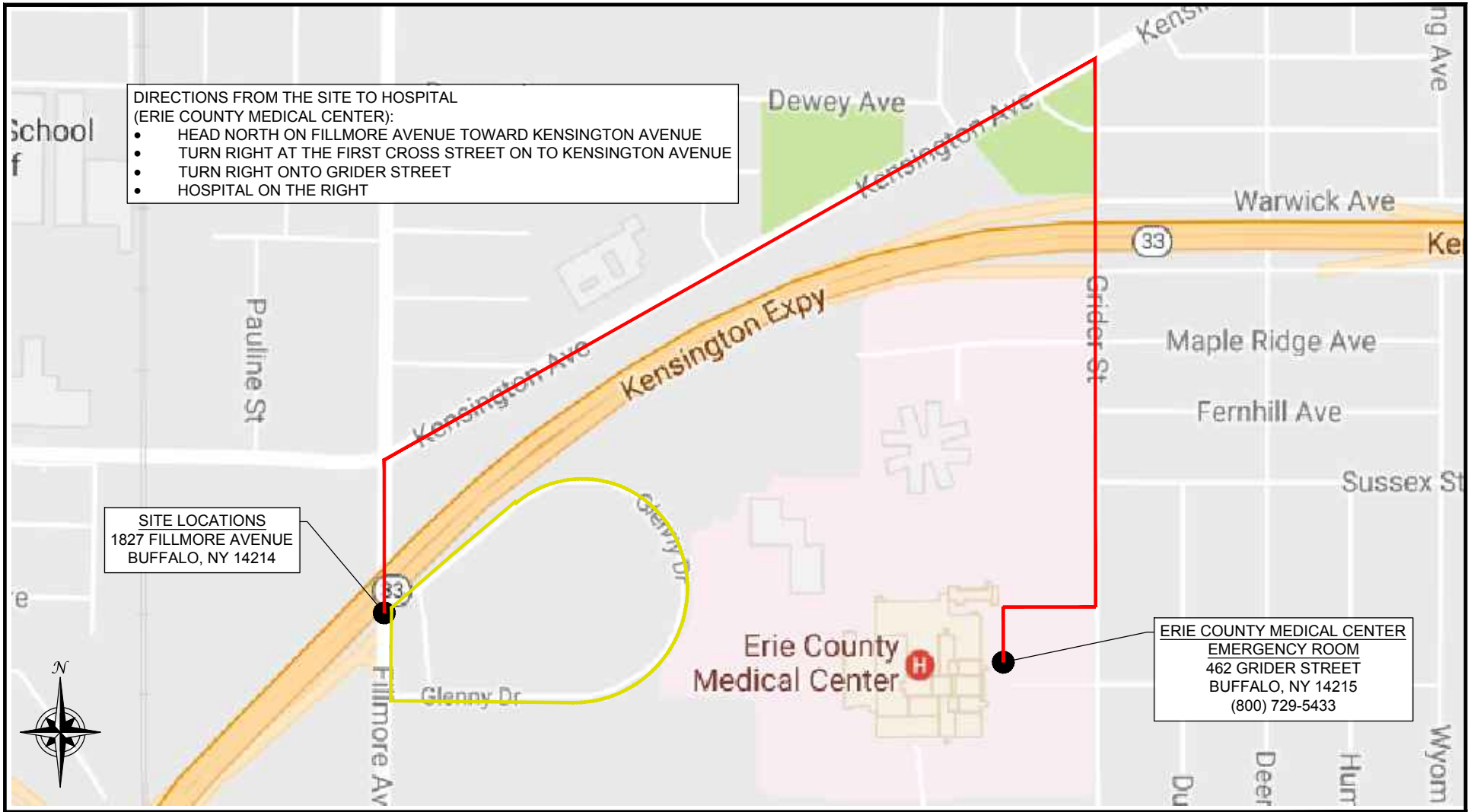
- Occupational injuries and illnesses.
- Accident investigations.
- Reports to insurance carrier or State compensation agencies.
- Reports required by the client.
- Records and reports required by local, state, federal and/or international agencies.
- Property or equipment damage.
- Third party injury or damage claims.
- Environmental testing logs.
- Explosive and hazardous substances inventories and records.
- Records of inspections and citations.
- Safety training.

10.0 EMERGENCY RESPONSE TRAINING

Persons who enter the worksite, including visitors, shall receive a site-specific briefing about anticipated emergency situations and the emergency procedures by the SSHO. Where this site relies on off-site organizations for emergency response, the training of personnel in those off-site organizations has been evaluated and is deemed adequate for response to this site.

FIGURES

F:\CAD\Benchmark\Rupp, Baase, Pfalzgraf & Cunningham LLC\1827 Fillmore Avenue\03 - RI Work Plan\HASP\Figure 1; Hospital Route Map.dwg



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0421-017-001

DATE: JUNE 2017

DRAFTED BY: CCB

HOSPITAL ROUTE MAP

EMERGENCY RESPONSE PLAN

1827 FILLMORE AVENUE SITE
BUFFALO, NEW YORK

PREPARED FOR

1827 FILLMORE LLC

FIGURE 1

ATTACHMENT B

HOT WORK PERMIT FORM

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

HOT WORK PERMIT

PART 1 - INFORMATION

Issue Date:	
Date Work to be Performed: Start:	Finish (permit terminated):
Performed By:	
Work Area:	
Object to be Worked On:	

PART 2 - APPROVAL

(for 1, 2 or 3: mark Yes, No or NA)*

Will working be on or in:	Finish (permit terminated):	
1. Metal partition, wall, ceiling covered by combustible material?	yes	no
2. Pipes, in contact with combustible material?	yes	no
3. Explosive area?	yes	no

* = If any of these conditions exist (marked "yes"), a permit will not be issued without being reviewed and approved by Thomas H. Forbes (Corporate Health and Safety Director). Required Signature below.

PART 3 - REQUIRED CONDITIONS**

(Check all conditions that must be met)

	PROTECTIVE ACTION		PROTECTIVE EQUIPMENT
	Specific Risk Assessment Required		Goggles/visor/welding screen
	Fire or spark barrier		Apron/fireproof clothing
	Cover hot surfaces		Welding gloves/gauntlets/other:
	Move movable fire hazards, specifically		Wellintons/Knee pads
	Erect screen on barrier		Ear protection: Ear muffs/Ear plugs
	Restrict Access		B.A.: SCBA/Long Breather
	Wet the ground		Respirator: Type:
	Ensure adequate ventilation		Cartridge:
	Provide adequate supports		Local Exhaust Ventilation
	Cover exposed drain/floor or wall cracks		Extinguisher/Fire blanket
	Fire watch (must remain on duty during duration of permit)		Personal flammable gas monitor
	Issue additional permit(s):		

Other precautions:

** Permit will not be issued until these conditions are met.

SIGNATURES

Orginating Employee:	Date:
Project Manager:	Date:
Part 2 Approval:	Date:

ATTACHMENT C

NYSDOH GENERIC COMMUNITY AIR MONITORING PLAN

BENCHMARK TURNKEY

Appendix C1
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

Appendix C2
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

APPENDIX F

PROJECT DOCUMENTATION FORMS

BENCHMARK
ENVIRONMENTAL
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DAILY LOG				
	DATE			
	NO.			
	SHEET		OF	

FIELD ACTIVITY DAILY LOG

PROJECT NAME:	PROJECT NO.
PROJECT LOCATION:	CLIENT:
FIELD ACTIVITY:	

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION

VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
A.M.:	
P.M.:	

PERSONNEL ON SITE:

SIGNATURE DATE:

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

DAILY LOG	DATE			
	NO.			
	SHEET		OF	

FIELD ACTIVITY DAILY LOG
(CONTINUED)

PROJECT NAME:	PROJECT NO.

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION

SIGNATURE DATE:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

DAILY LOG	DATE			
	NO.			
	SHEET		OF	

FIELD ACTIVITY DAILY LOG
(CONTINUED)

PROJECT NAME:	PROJECT NO.

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION

REFERENCED PROJECT FIELD FORMS:

☐ Aquifer Test Data Sheet	☐ Impacted Soil Excavation Log	☐ Soil Gas Survey Log
☐ Chain-of-Custody Form	☐ Impacted Soil Transportation Log	☐ Step-Drawdown Test Data Sheet
☐ Construction Sample Summary Log	☐ Monitoring Well Inspection Form	☐ Survey Elevation Log
☐ Corrective Measures Report	☐ Nuclear Densitometer Field Log	☐ Tailgate Safety Meeting Form
☐ Daily Drilling Report	☐ Photographic Log	☐ Test Pit Excavation Log
☐ Drilling Safety Checklist	☐ Pipe Leakage Testing Log	☐ Underground/Overhead Utility Checklist
☐ Equipment Calibration Log	☐ Post-Closure Field Inspection Report	☐ Variance Log
☐ Field Borehole Log	☐ Pressure Packer Testing Log	☐ Water Level Monitoring Record
☐ Field Borehole/Monitoring Well Installation Log	☐ Problem Identification Report	☐ Water Quality Field Collection Log
☐ Field Investigation Report	☐ Real-Time Air Monitoring Log	☐ Water Sample Collection Log
☐ Field Slug Test Log	☐ Record of Telecom Meeting	☐ Well Abandonment/Decomm. Log
☐ Groundwater Elevation Log	☐ Sample Summary Collection Log	☐ Well Completion Detail
☐ GW Well Development and Purge Log	☐ Sediment Sample Collection Log	☐
☐ Hot Work Permit	☐ Seep Sample Collection Log	☐
☐ IDW Container Log	☐ Seepage Meter Sample Collection Log	☐

SIGNATURE DATE:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

DAILY LOG	DATE			
	REPORT NO.			
	PAGE		OF	

PROBLEM IDENTIFICATION REPORT

Date:

Project:

Job No:

Location:

CQA Monitor(s):

Client:

Contractor:

Contractor's Supervisor:

WEATHER CONDITIONS:

Ambient Air Temp. - A.M.:

Ambient Air Temp. - P.M.:

Wind Direction:

Wind Speed:

Precipitation:

Problem Description:

Problem Location (reference test location, sketch on back of form as appropriate):

Problem Causes:

Suggested Corrective Measures or Variances:

Linked to Corrective Measures Report No. *or Variance Log No.*

Approvals (initial):

CQA Engineer:

Project Manager:

Signed:

CQA Representative

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

DAILY LOG	DATE			
	REPORT NO.			
	PAGE		OF	

CORRECTIVE MEASURES REPORT

Date:

Project:

Job No:

Location:

CQA Monitor(s):

Client:

Contractor:

Contractor's Supervisor:

WEATHER CONDITIONS:

Ambient Air Temp. - A.M.:

Ambient Air Temp. - P.M.:

Wind Direction:

Wind Speed:

Precipitation:

Corrective Measures Undertaken (reference Problem Identification Report No.)

Retesing Location:

Suggested Method of Minimizing Re-Occurrence:

Approvals (initial):

CQA Engineer:

Project Manager:

Signed:

CQA Representative

APPENDIX G

ELECTRONIC COPY

BENCHMARK TURNKEY